PHILOSOPHICAL PAPERS

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PHILOSOPHICAL PAPERS.

I.—EXAMINATION OF SIR W. HAMILTON'S LOGIC.

II.—REPLY TO MR. MILL'S THIRD EDITION.

III.—PRESENT STATE OF MORAL PHILOSOPHY IN BRITAIN.

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BY

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In leaving this land and going to a distant country, I venture to lay these papers before the British public, in the hope that they may stimulate inquiry in regard to the important philosophic subjects discussed.

Queen's College, Belfast, *Sept.* 1868.

I.

EXAMINATION OF SIR W. HAMILTON'S LOGIC.

If we look back half a century we find Formal Logic taught in nearly all the colleges of Great Britain and Ireland, but exercising an influence infinitely less than nothing (to use a phrase of Plato's) on the thought of the country. Some of the professors and tutors were expounding it in a dry and technical manner, which wearied young men of spirit, and bred a distaste for the study: while others adopted an apologetic tone for occupying even a brief space with so antiquated a department, and threw out hints of a new Logic as about to appear and supersede the old. The lingering life maintained by that old Aristotelian and Scholastic Logic, in spite of the ridicule poured upon it by so many of the fresh thinkers of Europe for two or three centuries after the revival of letters, is an extraordinary fact in the history of philosophy: I believe it can be explained only by its containing substantially the correct analysis of the process which passes through the mind in reasoning. Certain it is that no proffered logical systems have been able to set aside the Aristotelian, whether devised by Ramus, by the school of Descartes, the school of Locke, or the school of Condillac: all have disappeared after creating a brief expectation followed by final disappointment. It is a remarkable circumstance that the revived taste for logical studies in our age has proceeded from a restoration of the old Logic by two distinguished men, both reformers in their way, but both devoted admirers of the analytic of Aristotle. I need scarcely say I refer to Dr. Whately and Sir W. Hamilton.

Whately first gave his views to the public in an article in the *Encyclopædia Metropolitana*, which was expanded into his

Elements in 1826. The publication constitutes an era in the history of the study in Great Britain. The admirable defence of the old Logic against the objections of such men as Principal Campbell and Dugald Stewart, and still more the fresh and apt examples substituted for the dry stock ones which had been in use for a thousand or two thousand years, speedily attracted the favourable attention of the fresh thinkers of the age; and Aristotle was once more in the ascendant. But while Whately's *Elements* is an interesting and a healthy work, it can scarcely be described as specially a philosophic one. In order to complete the reaction, another thinker had to appear and subject the whole science to a critical examination fitted to satisfy the deeper philosophic mind of the country. It is a curious circumstance that Hamilton uttered his first oracular declarations in a severe article on Whately in the *Edinburgh Review* (1833), published afterwards in his *Discussions*. He embraced the opportunity to bring forth the result of his logical researches, and specially to introduce to Great Britain the Logic which had sprung up in Germany out of Kant's *Critick of Pure Reason*. Since that date Logic has had a greater amount of interest collected round it in Great Britain than any other mental science, and has become incorporated with the freshest and brightest thought of the country. The interest in the study has been increased by the *Logic* of Mr. J. S. Mill, who has evidently felt the influence of Whately in the respect which he pays to Formal Logic, but adheres as a whole to the principles of his father, Mr. James Mill, introducing some thoughts from the cognate Positive Philosophy of M. Comte. Mr. Mill, however, has given an impulse to the study, not by the portion of his work which treats of Formal Logic—which is not of much scientific value, but by his admirable exposition of the Logic of Induction. I have reviewed in a separate work the Logic of Mr. Mill. In this paper I am to notice the modifications which have been introduced by Sir W. Hamilton, Dr. Mansel, and Archbishop Thomson.

Hamilton is entitled to be regarded as the author of the "New Analytic" as he calls it, after the Old Analytic or syllogistic analysis of the reasoning process unfolded in the *Fir*

Analytics. But he has had powerful coadjutors in the two eminent men I have named: both of whom have evidently drawn from the same German sources as Hamilton; and both of whom have a fountain within in their own independent thought. Mansel is endowed with an acumen equal to that of the *Doctor Subtilis* or any other of the Schoolmen, and has acquired an erudition not surpassed by that of any German scholar. Thomson's *Outlines of the Laws of Thought* contains a clear and masterly exposition of the science, which no doubt helped to raise him in comparatively early age to the high office which he now holds. And here I am tempted to remark that the Church of England has much credit in the way in which she has rewarded those of her sons who distinguish themselves in the higher walks of thought and scholarship. She gave Butler, the great ethical philosopher, her richest bishopric, that of Durham, and in our day she has made two of our great logical writers Archbishops, the one of Dublin, the other of York. It would be for their own benefit, and for the benefit of learning, were unendowed churches, whether in Britain or America, to imitate her in this respect, and not only encourage popular gifts, but provide high places for those sons of theirs who betake themselves to the upper walks of literature and science, philosophy and theology. But returning from this digression, I am bound in honesty to say that the clearest and in every way the most perfect and satisfactory account of the new Logic is to be found, not in Hamilton's own Lectures, which were left in a crude state, nor in the works of Thomson and Mansel, but in the Logic of Professor Bowen, of Harvard College, U.S.[1]

The New Analytic proceeds directly or indirectly from the philosophy and Logic of Kant. Not that it is to be found in the works of Kant, but it is largely grounded on the peculiar metaphysics of the *Critick of Pure Reason:* it rose out of the searching criticism to which Kant had subjected the forms of

[1] It is not my office to criticise the logical treatises of the United States: in fact I have not a complete collection of them. I observe in some of them, such as Atwater's excellent Manual of Elementary Logic, a disposition to unite the real improvements of the New Analytic with the established truths of the old Logic.

the Old Logic; and it ramified directly from the logical treatises of such men as Esser and Krug, who belonged to the school. At the same time the system as a whole is an original one, the architect being Hamilton, and the others builders along with him. It has a composite appearance, being in fact of a composite character, resembling the renovations we see in our country of mediæval buildings, the old and the new adapted to each other with wonderful skill, but all the while with an incongruity forcing itself at times on the notice of the careful observer. I am not convinced that all the parts are likely to be preserved in the shape they now have, or that the Analytic always gives us the ultimate expression of the laws of thought; but I am sure that it is a valuable accession to the science. Altogether independent of its positive improvements, it has done great service by the careful examination to which it has subjected the Old Logic, which has come so creditably out of the trial. Forms which had become venerable, and, I may add, stiff from age, and which were inclined to stand on their dignity and acknowledged authority, have been obliged to submit to a sifting scrutiny, which may have shorn them of some of their ridiculous pretensions, but has at the same time delivered them from the dry dust which had gathered around, and threatened to bury them. The New Analytic having been before us for an age in a half-developed, and for half an age in a fully developed form, the time has now come for subjecting it to a critical examination, in order to determine what is true and valuable and worthy of being retained; what is imperfect and capable of improvement; and what is to be rejected as being fallacious or mistaken. I hope that out of these discussions there will arise a further improved Logic founded on that of Aristotle, of the Scholastics, and the various technical works of the seventeenth century; embracing all that is valuable in the Kantian and Hamiltonian reformations: but with a freshness and an adaptation to the thought of the age, like the Logic of Whately. There is certainly room for such a work.

The defects and errors of the new Logic are derived from its German paternity. It is infected throughout with the metaphysics of Kant, from which it will require to be delivered

before it is deserving of acceptance. It everywhere presupposes or implies that there are Forms in the mind, which it imposes on objects as it contemplates them: and it makes the science altogether *a priori*, and to be constructed apart from, and independent of, experience and observation. Hamilton quotes (*Logic*, Lect. IV.) Esser with approbation: "It is evident that in so far as a form of thought is necessary, this form must be determined or necessitated by the nature of the thinking subject itself. . . . The first condition of a form of thought is, that it is subjectively, not objectively, determined." This fundamental error (for so I reckon it) runs through the whole system, and injures and corrupts the valuable truth to be found in the Logic of Hamilton. I acknowledge that there are principles or laws in the mind, original and native: but these do not superinduce or impose forms on objects as we look at them; they simply enable us to perceive what is in the objects. True, there are *a priori* laws in the mind operating prior to experience; but we can discover their nature and give an accurate expression of them only by means of careful observation. The science of Logic, as the science of the Laws of Discursive Thought, is to be constructed only by a careful inductive investigation of the operations of the human mind as it is employed in thinking. I am in this paper to inquire how far the supposed improvements found in the Logic of the School are in agreement with the actual processes of the mind in its Notions, Judgments, and Reasonings.

I. THE LOGICAL NOTION.

This is the logical topic most requiring (as it appears to me) to be cleared up. Of late years much attention has been paid to Judgment and Reasoning, and comparatively little to what is involved in Simple Apprehension, the product of which, as it considers objects, I call the Notion. I am convinced that when the nature of the Notion is thoroughly unfolded, it will virtually settle for us the still disputed questions as to the further processes of Judgment and Reasoning.

One point alone under this head has Hamilton given us

an addition to Logic. He has explicated more fully, and elaborated more carefully than had ever been done before, the distinction between the Extension and the Intension or comprehension of the Notion. Otherwise I do not think he has thrown any light on this part of Logic in which lies the key to open the other and inner compartments. His views are thoroughly Kantian: he proceeds on the idea that the mind in its conception of objects has forms of its own which it imposes on what it contemplates. Further, he acknowledges in his logical construction only one kind of Notion, the General Notion, what he calls the Concept; thus overlooking two other species of Notions, what I call the Singular Concrete and the Abstract. It will be necessary to look at these two, as the more simple, before we consider the General Notion or Universal.

(1.) *The Singular Concrete Notion.*—This is the simple apprehension of objects, whether made known by the simple cognitive powers, such as Sense-Perception and Self-Consciousness, or by the Reproductive Powers, such as Memory and Imagination. The object is apprehended as *singular*, or one thing; and as *concrete*, that is, an object with its qualities. Such is the knowledge or idea we have of an external object before our senses, or remembered, say, of this man or that mountain, or of ourselves or others in a certain state, say as thinking or conversing. I acknowledge that in the formation of this notion there is no exercise of discursive thought: the whole is the work of immediate perception or intuition. Still, it is the apprehension with which the mind starts, and which furnishes the materials out of which every other is fashioned. Further, it comes into discursive thought, when we compare any singular notion, say "Hamilton," with a general notion, say "logician," and affirm that "Hamilton was a logician." It ought therefore to be considered in the evolution of the science. Hamilton has not inquired specially into its nature. Instead of regarding the singular concrete notion as arising simply on the contemplation of single objects, with their aggregate of qualities, Kant makes the mind from its own store of forms give a unity to the scattered qualities; and

Hamilton proceeds on the same supposition. At times indeed he has a glimpse of the true doctrine, but he never states it precisely. He says (*Metaph.* Lect. XXVII.) that we are "at once and primarily percipient of masses;" and (*Logic*, Lect. XII.) that "all objects are presented to us in complexity;" and that their characters are "originally known to us in their vague or confused totality." The true doctrine is, that we are primarily percipient of single objects in the concrete, that is, with their qualities as presented to us.

(2.) *The Abstract Notion;* that is, the notion of a part as a part, more technically of an attribute of an object. The account given by Hamilton in his *Metaphysics* (Lect. XXXV.) is fair enough: "We can rivet our attention on some particular mode of a thing, as its smell, its colour, its figure, its size, etc., and abstract it from the others. This may be called Modal Abstraction. The abstraction we have now been considering is performed on individual objects, and is, consequently, particular [singular?]. There is nothing necessarily connected with generalization in abstraction; generalization is indeed dependent on abstraction, which it supposes; but abstraction does not involve generalization. I remark this because you will frequently find the terms abstract and general applied to notions used as convertible." He then quotes D. Stewart, who says: "A person who had never seen but one rose might yet have been able to consider its *colour* apart from its other qualities; and therefore there may be such a thing as an idea which is at once abstract and particular." This account is satisfactory, as showing that Hamilton, like Stewart, acknowledged that the mind can form an abstract notion which cannot be described as general. It does seem strange, after this, to find him allotting no place to the Abstract Notion in his Logic. In his analysis he has, like all the logicians of the school of Kant, no other notion than the Concept or the General Notion. In consequence of this omission he has not been able to give an accurate account of certain peculiarities of thought which he has had the shrewdness to notice. I hope to show that we have only to give its proper place to the Abstract Notion to find that we are able to render a clear and scientific account of certain processes

of thought which the old Logic had overlooked, but which the Kantian Logic had observed; and that we can thereby remove the hiatus between the Kantian and Aristotelian Logic, and rear out of the two a simple and consistent structure.

(3.) *The General Notion.*—This is the Concept of the Kantian and Hamiltonian logic. In order to distinguish the other two, the Singular Concrete and the Abstract, from it, I am inclined to call them PERCEPTS and ABSTRACTS, and retain the word CONCEPT for the generalized notion. The first part of Logic will thus treat of Percepts, Abstracts, and Concepts. In the formation of the Concept the two first steps are, a perception more or less vague of concrete objects resembling each other; and the fixing more or less determinately on the points of resemblance. We then, as a third and the consummating step, form the class notion, which is such that it embraces all the objects possessing the common qualities, not merely the objects we happen to have noticed, but all others, real or imaginary. There are thus two elements involved in the Concept; there are objects combined, and there are qualities combining them. As embracing objects, the Concept is said to have Extension; as implying qualities, it is said to have Comprehension. The Extension becomes greater as the number of objects embraced in it increases; and the Comprehension becomes greater as the number of combining qualities increases.

But, according to this account, the distinction between the Extension and Comprehension of a Notion has no applicability to the Abstract Notion. Such Concepts as mineral, vegetable, animal, may have Extension, as they embrace objects; but such Abstracts as hardness, vitality, sensibility, and rationality cannot be said to embrace objects; they are merely qualities of objects. This reveals to us one of the fundamental errors of Hamilton, who, admitting no other notions than Concepts, makes all notions have both Extension and Comprehension. This has led, as we shall see, to an inconvenience; for, by exhibiting all arguments in the form both of Extension and Comprehension, he has multiplied the Modes of the syllogism to an extent which is felt to be a burden to the memory and the apprehension.

All Notions belong to one or other of those classes; they are Percepts, as, *that grave;* or they are Abstracts, as *peacefulness;* or they are Concepts, as *peaceful.* These may be mixed with each other in an indefinite number of ways, the product, the Mixed Modes of Locke, always belonging to some one of the three kinds of Notions. Thus Collective Notions are truly singulars; but composed of a number of singulars, each of which is in a class or under a universal notion; *e.g.*, "regiment" is a singular notion, not applicable to each of the soldiers comprised in it, but embracing a definite number of persons, each of whom falls under the head (indefinite) soldier. But let it be observed that this term may be made a general one, referring to all and to each of an indefinite number of objects, as when we speak of "cavalry regiments" and "infantry regiments." It should also be noticed that the same term is often made to stand both for an Abstract and a Concept. Thus, "substance" is primarily an Abstract term, standing for that which abideth in objects material or mental. But it stands for a Concept when we speak of there being two substances, mind and body. Thus, "virtue" is an abstract term, standing for the common quality of morally good actions; but it is also used as a common noun, as when we talk of the cardinal virtues. These distinctions will be found to have a great significance in the analysis of the process of thought involved in Judgment and Reasoning.

II. LOGICAL JUDGMENT.

The Quantification of the Predicate.—In the common Logic the predicate is represented as distributed in all negative propositions, but not distributed in affirmatives. Thus, when we say "no man is perfect," we exclude men from the whole class of perfect beings; but when we say "man is fallible," "fallible" is not taken for all its significates, for there may be other beings fallible as well as man. But Hamilton says that the predicate should always be quantified, that is, declared either particular or universal; thus, the logician should express the proposition last given, "All men = some fallible." He justifies this on the

ground that whatever is contained implicitly in spontaneous thought, should be unfolded explicitly in logical forms. I admit the principle, but I deny that it requires the quantification of the predicate in affirmative propositions. In the vast majority of affirmative propositions the predication is made in Comprehension rather than Extension. When we say that "the sea roars," we are attributing a quality to the sea, and we are not determining in thought whether there are other things that do or do not roar. When we say "man reasons," we are ascribing an attribute to him, probably without settling or even inquiring whether there are or are not other beings who reason, whether brutes do or do not reason; and so the logician is not required to put the proposition either in the form, "all men = some reasoning beings," or in the form, "all men = all reasoning beings."

Distinction between Substitutive and Attributive Judgments.—This is the distinction drawn by Dr. Thomson, who represents it as the same with that of Aristotle between Convertible and Inconvertible Propositions. Thus, "man is rational," is a Substitutive or Convertible proposition, for the two terms are coextensive, and we can say, "all rational beings are men;" while "man is mortal" is Attributive and Inconvertible, and we cannot say "all mortals are men."

But neither Hamilton nor Thomson has seen what is the precise nature of those propositions which are Substitutive or Convertible. It will be found that in these the terms are Singular or Abstract. In the Substitutive Proposition, "Sir Walter Scott was the author of Waverley," we are comparing two singular notions, one a singular concrete, and the other a singular abstract. In the Convertible Judgments, "$2 \times 2 = 4$," the notions are both abstract. The same is the case with all definitions, as when we say, "Logic is the Science of the Laws of Discursive Thought," the terms "Logic" and "the Science of the Laws of Discursive Thought," both designate one thing, and not, as general terms always do, an indefinite number of things possessing common attributes. I hold it to be the same in the proposition, "all men = all rational beings." It is of importance to determine what is the precise interpretation of such

propositions which play so prominent a part in the "New Analytic." When we say, simply, "all men are rational," we mean that every one man, every one in the class "man," is in the class "rational." But, if we have further found that every rational being is in the class man, we are entitled to say, "all men are all rational." But what do we mean when we say so? It seems clear to me that the terms are no longer general, standing for each one of a class; we do not mean "every one man = all rational;" nor, "every one man = every rational." The word "all" does not now mean "every one," but "all collectively." The meaning, in fact, now is, "the whole class men = the whole class rational." If so, the terms are not general, applicable to every one of an indefinite number, but singular, with a process of abstraction involved. To take one other example: The mathematician demonstrates that "equiangular triangles are equilateral," meaning that every one equiangular triangle is so. He also demonstrates that "equilateral triangles are equiangular." He can now say, "the whole class of equiangular triangles is equivalent to the whole class of equilateral;" and the terms are singular abstracts, and the proposition Substitutive and Convertible.

It is quite different in those propositions in which one notion is a Concept, or both are so. Here the relation involved is one of joint Comprehension and Extension, sometimes the one and sometimes the other being uppermost in thought. When we say "roses are dicotyledons," we mean that they have the attribute of growing from two cotyledons or seed lobes, and that they are in the class of dicotyledons. In such a proposition the predication is Attributive with Extension implied; and the terms are not Convertible, for there may be other things with the same attribute, or in the same class, as well as those of which the predication is made. We are now in circumstances to examine the Table of Judgments furnished by the school:

A. All plants grow.
E. No right action is inexpedient.
I. Some muscles act without our volition.
O. Some plants do not grow in the tropics.

U. Common salt is chloride of sodium.
Y. Some stars are all the planets.
ω. Some trees (oaks) are not some trees (poplars).
η. No New Englander is some Virginian.

These are the Judgments sanctioned by Hamilton. The two marked by the Greek letters are criticised by Thomson, and rejected on the ground that while they are conceivable cases of negative predication they are not actual—I would add, in spontaneous thought. Thus, η has the resemblance, not the power of denial; it denies nothing, and decides nothing. I discard *Y* on the ground that it is never uttered by us in spontaneous thought, in which we say, instead, "all the planets are stars (*A*)." Rejecting these three forms on these special grounds, I further decline to give them a separate place in the Table of Judgments, on the general ground already explained; that I do not believe, in all judgments, or even in most, that the predicate is quantified in spontaneous thought. I admit that they are forms which may be reached by Conversion, or other kinds of Immediate Inference, to be explained immediately; but then it has never been deemed necessary, or even proper, to introduce such among the forms of spontaneous judgment; and if we are to adopt these, we must, by parity of reason, introduce others, and make the table considerably more numerous. I am inclined, however, to think that it is of importance to separate those propositions which are Substitutive or Convertible in spontaneous thought from the others, and it may be of use to have a letter, *U*, to designate them. But let it be observed that, in the Judgments thus denoted, the notions compared are Percepts or Abstracts. We are thus enabled to retain the old Table, *A*, *E*, *I*, *O*, for all those judgments in which we have a Concept, adding *U* to include the important class of propositions which have been seen to be Convertible since the days of Aristotle, and which turn out to be those in which the Notions compared are not general or class notions.

Meaning of the Word "Some."—In the common Logic, *some*, as the sign of particularity, means *some at least*—some, we do not say how many, it may be only one, or it may even be all,

provided we do not declare it to be all. But, in late discussions, "some" has taken at least two other meanings. It may signify *some not all*, some at most, as when we say, "some lawyers are not greedy," implying that there are others who are greedy. Again, it may mean *some certain*, as the ω of the New Analytic, "Some trees (oaks) are not some trees (maples)." It is evident that if these meanings are introduced, the Table of Judgments must be considerably swelled, and swelled unnecessarily.

Relation of the Notions in a Judgment; or, in other words, what is the precise signification of the copula or *nexus* which binds the terms? The language of the school I am examining is, on this subject, vacillating and unsatisfactory in the extreme. Sometimes the relation is said to be one of Identity, and the whole of Logic is said to be regulated by the principles of Identity, Contradiction, and Excluded Middle. But, again, the relation is said to be one of Equation, and the proposition is written, "all men = some mortals." At times it is spoken of as the relation of Whole and Parts—the one term is part of the other. Again, it is represented as one in which the subject is contained in the predicate in respect of Extension, and the predicate contained in the subject in respect of Comprehension, *e.g.*, "man is mortal," means "man is contained in the class mortal," and "mortality is an attribute of man." But, once more, the relation is one of agreement or disagreement; in what, is not said. The question arises, which of these is the correct account, or do any or all of them express the exact truth? I believe there is a truth in all of them, but they do not, separately or collectively, unfold all that is contained in spontaneous thought.

It is true the relation is always one of *agreement* or *disagreement;* but the phrases are too vague; the science must be the reflection of what is involved precisely in our natural thinking. The relation is not always one of identity and non-identity, or of equality and inequality; for when we say "some metals are not heavier than water," we are not declaring that "some metals" are not identical with "heavier than water," nor that "some metals" are not equal to "heavier than water." Still

there are cases in which the relation is one of identity or equality, or, in one word, of equivalence, as when we say, "Wellington was the conqueror of Bonaparte at Waterloo;" "$3 \times 3 = 9$;" "Ethics is the science of man's motive and moral nature." But these turn out to be cases in which none of the terms is a Concept, in which, in fact, the Notions are Singular or Abstract. There are other cases in which the relation is one of Joint Comprehension and Extension; as when we say "lichens are plants," we mean that they have the properties of plants, and may be included in the class plants. In all such cases there is a class notion in the Judgment, or, more frequently, both are class notions.

It thus appears that the relation between the terms, or, in other words, the meaning of the copula, may be one or other of two things; it may be one of Equivalence, or it may be one of joint Comprehension and Extension. It is the former in all cases in which the terms are singular or abstract. And it may be observed that, in this class of propositions, neither term has any title more than the other to be regarded as subject or predicate—either term may be subject or predicate, as we choose to make it; and they may be converted without any change. Thus we can put the proposition in the forms they have taken in the last paragraph; but we can say with equal propriety, if it suits our purpose at the time: "The conqueror of Bonaparte at Waterloo was Wellington;" or, "$9 = 3 \times 3$;" or, "the science of man's motive and moral nature is Ethics." It is different with the other class of Judgments in which there is one Concept or two Concepts; one of them is naturally the subject and the other the predicate. We may say, "sweet is the breath of morn," but the subject is "breath of morn," and the predicate is "sweet." In this class of propositions the subject is the one to which the attribute is ascribed, the one included in the class, real or potential, possessing the attributes. Such propositions are not convertible, for there may be other objects possessing the attributes.

III. REASONING.

Immediate Inferences, so called by Hamilton and Thomson,

the same as Kant calls Syllogisms of the Understanding. They are inferences without a middle term. They have been beautifully expanded by Thomson, when, from the single judgment, "all men are mortal," he derives fourteen others. They constitute a real accession to the science. Not that they were altogether overlooked by the old logicians, who, under Judgment, treated of Conversion and Opposition, which are, in fact, forms of what is called Immediate Inference. I am inclined to think that they should be treated under the head of Judgment rather than Reasoning. They are, in fact, TRANSPOSED OR IMPLIED JUDGMENTS. If this were the place, I think I could show that they are all involved in the relations of the Notions compared. When the relation is one of equivalence, the new forms are all involved in the identity or equality. Thus, if there be given us, "Socrates was the noblest philosopher of Greece," and "the angle A B C = the angle D E F," we can also say, "the noblest philosopher of Greece was Socrates," and "the angle D E F = A B C," etc. But, when the relation is one of Joint Extension and Comprehension, we can draw out all that is implied both in the Extension and Comprehension. Thus, from the judgment, "all men are mortal," we can, by Extension and Comprehension, draw the following:—

EXTENSION.

Every man is in the class mortal.
This man is in the class mortal.
Every tribe of men is in the class mortal.
Some men are mortal.
Some mortals are men.
It is not true that no men are mortal.
It is not true that some men are not mortal, etc.

COMPREHENSION.

Mortality is an attribute of every man.
Mortality is an attribute of this man.
Mortality is an attribute of every tribe of men.
Mortality is an attribute of some men.
Immortality may be denied of all men.
No man is immortal.
Immortal beings are not men.
Men of wealth are mortal with their wealth, etc.

The Regulating Principle of Reasoning.—Hamilton and his school vacillate on this point, as they do in regard to the

relation of the terms in the proposition. Sometimes it is said to be principle of Identity: "Things which are the same with a third are the same with one another." Sometimes it is the principle of Whole and Parts: "What is a part of a part is a part of the whole." Sometimes it is a principle of Attribution: "*nota notæ est nota rei ipsius.*" At times they seem to be defending the *dictum* of Aristotle, "whatever may be predicated of a class may be predicated of all the members of the class." Very often it is put in the form: "Things which agree with one and the same thing agree with one another." This last is undoubtedly correct, and is applicable to all mediate reasoning: but then it is too wide; we must specify the nature of the agreement necessary to make the reasoning valid. At this point the distinction between the Singular and Abstract Notion on the one hand, and the General Notion on the other will be found serviceable to us; will be found, in fact, to settle the disputed points in Formal Logic. It has been seen by many profound logicians that the *dictum* is not the accurate expression of the regulating principle applicable to certain simple forms of reasoning. That principle is, "*Things which are equivalent to* (that is, identical with, or equal to) *one and the same thing are equivalent to one another.*" This is the principle regulating all reasoning in which the terms are Singular or Abstract, as,

> David was the youngest son of Jesse;
> David was the youth who slew Goliath;
> ∴ The youngest son of Jesse was the youth who slew Goliath.

Or,

> Logic is the Science of the Laws of Discursive thought;
> Metaphysics is not the Science of the Laws of Discursive Thought.
> ∴ Logic is not Metaphysics.

We have seen, formerly, that in such propositions the two terms are convertible; we may make either the subject and either the predicate. I have now to add, that in reasoning with such terms there is no such thing, properly speaking, as Figure. The middle terms "David" and "the Science of the Laws of Discursive Thought," may take any place you plea

the premises, and the reasoning be equally valid, and, I may add, equally correct in form. Under this head I place

THE UNFIGURED SYLLOGISM OF HAMILTON:

Copperas and sulphate of iron are identical;
Sulphate of iron and sulphate of copper are not identical;
Copperas and sulphate of copper are not identical.

In this form the things we compare in thought do not constitute the terms, and the copula, "identical with," is turned into the predicate. Express the reasoning properly and it is seen that the terms are singular:

U. Copperas is sulphate of iron;
U. Sulphate of iron is not sulphate of copper;
U. Sulphate of copper is not copperas.

Great clearness is introduced into the analysis of the reasoning process by allotting to such cases, with their principle, a separate place.

The Dictum of Aristotle.—The middle term, by which the comparison of the extremes is effected, is, in both premises, put under a class, or has a class or an individual put under it; and the law regulating the whole process is: "Whatever may be predicated of a class may be predicated of all the sub-classes and individuals placed under it." Figure, or the position of the middle term in reference to the extremes, has now a place, and an important place; and it is the fittest principle according to which to divide the forms of the syllogism. The various formulæ originating with Aristotle and perfected by the scholastics and the logicians of the seventeenth century, and constituting a body of rules as complete as are to be found in any science, are now at our service. Fortunately we are not required to abandon them, though we limit them to reasoning in which there is a class notion.

We have thus two regulating principles of reason. But may not the two be combined? I believe there are cases, not very numerous, but still of some importance, in which they are:

A. Locke lived in the seventeenth century;
U. Locke is the greatest of English metaphysicians;
A. The greatest of English metaphysicians lived in the seventeenth century.

Perfect Induction, in which we affirm of a whole class what we have found true of each of the members of the class, falls under this head:—

A. Shem, Ham, and Japheth were in the ark;
U. Shem, Ham, and Japheth were the whole sons of Noah;
A. The whole sons of Noah were in the ark.

In both these examples two of the terms are Singular, and one of the premises is convertible, because the relation of the terms is identity. To this same head I refer a case of Thomson's:—

A. Certain sciences are classificatory;
U. These sciences = Mineralogy, Botany, and Zoology;
A. Mineralogy, Botany, and Zoology are classificatory.

It would not be difficult to draw out a few formulæ embracing all cases of valid reasoning of this mixed character.

Reasoning in Comprehension.—It now only remains to discuss the question whether reasoning is according to the Extension or Comprehension of the Notions, or according to both. Hamilton maintains that reasoning is primarily in Comprehension. I have thought much on the subject, and have come to a different conclusion. First of all, in reasoning, proceeding on the principle of equivalence or equipollence, we cannot proceed according either to Extension or Comprehension, for the terms, properly speaking, have neither. Then, in regard to reasoning with Concepts or Attributive Judgments, it is admitted by him and by me, that it may be expressed in either form. The reason has been given. Every Concept has both Extension and Comprehension, and every Attributive (not every Substitutive) proposition may be interpreted in both. If you have reasoning in the form of Extension, you can translate it into Comprehension and *vice versâ*. The question is, which is uppermost in spontaneous thought? With the great body of modern logicians, I hold that we look first to Extension. When we argue that the "Red Indian, having the power of speech, is a human being," we refer, in thought, the Red Indian to the class of those who have the power of speech, and proceed on the principle that the class men have all the power of speech. Of course the possession of attributes is implied in each of the

terms; but, in the ratiocination, we require to proceed on the principle that there are classes possessing the attributes; and it is because this is recognized that the conclusion is seen to follow. Hence it is that logicians insist that in the evolution of the process there should be a major premise as well as a minor expressed. The following is Hamilton's explication of reasoning in Comprehension, when we argue "that man, being responsible, must be a free agent:"—

"The notion man comprehends in it the notion responsible agent. But the notion responsible agent comprehends in it the notion free agent; Therefore, on the principle that the part of a part is a part of the whole, the notion man also comprehends in it the notion free agent."

Let it be observed that, of the three notions involved, "man," "responsible," "free agent," two, at least, "man" and "free agent," are class notions, and even "responsible" is potentially a class notion. The reasoning is conclusive only on the condition that the whole class "man" is in the class "responsible," which, again, is in the class "free agent." But the interpretation in Comprehension is always possible; it may often be expedient to give it; and it is of importance that students of Logic should know how to give it in every case.

I have taken up, I believe, all the modifications proposed by the school of Hamilton. I have given what I believe to be the correct version of the phenomena of the thinking mind, which have been brought prominently under notice by that able class of thinkers. The conclusions which I have reached enable us to retain the old Logic with all its scientific perfection, while adding some fresh and important laws which it had overlooked, not destructive of the system, but tending rather to bear it up.

In the Third Edition of his *Examination of Sir William Hamilton's Philosophy*, Mr. Mill has replied to his critics. This paper may be considered as my answer to the part bearing on me. The combatants are now brought to very close quarters. We see clearly what are the questions at issue. The article may thus form a sort of *résumé* of the whole controversy, not so far as it relates to Hamilton, but so far as it bears on what is far more important, the fundamental truth which Mr. Mill has assailed.

II.

REPLY TO MR. MILL'S STRICTURES IN HIS THIRD EDITION.

ARTICLE I. *Mr. Mill's Philosophic Predecessors.* (p. 14.)

I REQUIRE, before entering on the discussion, to refer to one or two personal matters, these fortunately not involving any offensive personal feeling. I had spoken of Hobbes, Hartley, Hume, and Brown as Mr. Mill's philosophic ancestors, and of Mr. James Mill and M. Comte as having had influence on the young thinker, and of M. Comte as having led him to regard it as "impossible for the mind to rise to first or final causes, or to know the nature of things" (*Examination of Mill's Philosophy*, p. 8). I did so, because M. Comte, the great defender of that doctrine, had expounded his views before Mr. Mill had published anything. But Mr. Mill tells us: "The larger half of my *System of Logic*, including all its fundamental doctrines, was written before I had seen the 'Le Cours de Philosophie Positive.' That work was indebted to M. Comte for many valuable thoughts, but a short list would exhaust the chapters, and even the pages which contain them" (p. 267). I suppose he means to include not merely his *System of Logic*, but the fuller exposition which we have in some of his other works, in which he has expounded doctrines identical with those held by M. Comte, and usually fathered upon him. He assures us, however, in regard to the general doctrine of Nescience, as I call it, he was familiar with it "before I was out of my boyhood, from the teachings of my father. Ever since the days of Hume, that doctrine has been the general property of the philosophic world. From the time of Brown, it has entered into popular philosophy." This statement does not differ essentially from mine, only it ascribes less to M. Comte,

and more to Mr. James Mill, who is represented as teaching the doctrine to his son from boyhood. I leave this statement without comment, except that I must protest against representing Brown, who argued for the existence of God from the traces of design, as discarding either first or final causes.

Mr. Mill admits (p. 319) "Dr. M'Cosh's work is unimpeachable in respect of candor and fairness." I accept the compliment. I did intend to act fairly towards my distinguished opponent; and carefully abstained from quibbling and captiousness, when strongly tempted to indulge in it by what seemed the severe criticism of Mr. Hamilton. Esteeming moral higher than intellectual qualities (so deified by Buckle and others of the school), I value this testimony higher than I would have done a laudation of my abilities. But the compliment is followed by a charge, that "he cannot be relied on for correctly apprehending the maxims and tendencies of a philosophy different from his own," and he complains that "he has not been able, even a little way, into the mode of thought he is combating" (p. 250). All I have to say here is, that if I have not been able to do so, it must be owing to some hebetude of intellect; for I was reared in favorable circumstances for understanding the system and its tendencies. Albeit some years younger than Mr. Mill, I was brought up intellectually in a position not so widely different from those in which he was trained. The first professor of mental science who impressed me favorably, which he did by his cool intellectual power, was Mr. James Mylne of Glasgow University, who following Destutt de Tracey, derived all our ideas from sensation, memory, and judgment. The first metaphysical work I read with admiration, was the *Lectures* of Thomas Brown. At a prematurely early age, I had perused the philosophic works of Hume. I read James Mill's *Analysis* at the time it came out, and also Sir James Mackintosh's *Dissertation*, in which he attempts to resolve conscience into the association of ideas. All along, indeed, I had a suspicion that the refined analysis

of these writers was far too subtile, and that they must be overlooking some of the deepest and most characteristic phenomena of the mind. Still, these were the men (not to speak of ancient philosophers) for whom, in my juvenile years, I had an admiration, rather than towards Reid, or even Stewart or Locke; and I believe I entered a good way into their modes of thought and their systems. But on mature and independent reflection, I had found my way out of their subtilties, and this before I knew anything of Hamilton, who turned the tide in public sentiment. At a time when the *Philosophie Positive* was known to few in this country, I read it with care, and I saw at once that it would come to be a power in this century, quite equal to Hobbes in the seventeenth and of Hume in the eighteenth centuries; and I noticed it in my first published work (*Method of Divine Government*, B. II. c. ii., Note D). On my first reading Mill's *Logic*, which was not for some time after its publication, I saw that the philosophy in which I had been brought up was involved throughout. The literary work on which I was engaged at the time when Mill's *Examination of Hamilton* came out, was an expository and critical account of Hume's philosophy for this *Review*, and intended to find a place in a contemplated work on the Scottish philosophy; and the book came out in time to enable me to bring out in a set of foot-notes, the curious correspondence between the philosophy of Hume and that of Mill. I mention these things, to show that I should be quite prepared to enter a considerable way into Mr. Mill's mode of thought. But by painful cogitation I had wrought myself out of it, and believed I had discovered the fundamental fallacies of the whole philosophy. The one qualification which I possessed for the task of examining Mr. Mill, lay in my having been trained in much the same school, and having risen above it; and I thought it right to give to the world, with an application to the very able work which appeared, the arguments which had convinced myself, and which I had expounded for years to my college classes.

Mr. Mill is often alleging against those who oppose him, that they are not able to place themselves "at the point of view of a theory different" from their own. But has Mr. Mill never put to himself the question, "May I not have fallen into the sin I have laid to the charge of my opponents? Have I ever thoroughly entered into and sympathized with that high-souled philosophy which was introduced by Plato, which was continued by men like Augustine, Anselm, Descartes, Cudworth, Leibnitz, Jacobi, and Kant, and Cousin; and in a lower key, by Aristotle, Buffier, Reid, Stewart, and Hamilton?" I admire greatly the ability, dialectic and deductive, of Mr. Mill. It is peculiarly a clear, a penetrating understanding; but it is not distinguished by wide sympathies and philosophic comprehensiveness. He does admire Plato and Coleridge; but it is because the former had so much of the search-spirit and the undermining dialectic; and because the latter was dissolving the old philosophy and theology of Britain. I am convinced that he has seen so many contradictions in Hamilton, because he could not always take into view the full sweep of his massive, but at times ill-constructed system. When he commends an opponent, as he does Hamilton often and Mansel at times, it is when he sees they are travelling towards the point which he himself has reached. It is surely conceivable that he may have been so filled with his own system, inherited from a beloved father, and cherished resolutely at the time when the tide was all against him, and that it may now bulk so largely before his eyes, as to make him to some extent incapable of appreciating, or even thoroughly comprehending, those who look on things from a different point of view.

I do believe, that, because of my philosophic experience, I am able, at least, to look at both sides of the question. I claim to understand the "maxims" of this philosophy, — except, indeed, that I confess to a difficulty in apprehending how, on his principles, he reaches the idea of extension, or a reasonable conviction of the existence of his fellow-men. Possibly I may be able to judge of the "tendencies" of it

as coolly and unpartially as those who have constructed it. He has himself characterized the Sensational philosophy of France, as "the shallowest set of doctrines which were ever passed off upon a cultivated age as a complete psychological system, the ideology of Condillac and his school; a system which affected to resolve all the phenomena of the human mind into sensation, by a process which essentially consisted in merely *calling* all states of mind however heterogeneous by that name" (*Discuss.* vol. i. p. 410). But Condillac, as a philosophic thinker, a scholar, and a writer, was equal to Mr. Mill, and was quite as acute in arguing against Descartes and Malebranche, as Mill is against Whewell and Hamilton, and had much the same kind of influence in France a hundred years ago that Mr. Mill is now exercising in England. I am convinced that Condillac had no idea that any evil consequences would follow from his philosophic theories. Most of his works were written for the purpose of training a prince of Parma: he believes that there is a God; "that the laws which reason prescribes to us are the laws which God has imposed on us; and that it is here that the morality of actions is completed. There is, therefore, a natural law; that is to say, a law which has its foundation on the will of God" (*Traité des Animaux*, c. vii.). I admit that the two systems, that of Condillac and that of Mill, are not the same; but it could be shown that they have a much closer correspondence in themselves, and in their logical and practical consequences, than Mr. Mill will be disposed to allow. Both derive our ideas from sensation; but Mr. Mill takes credit for adding association, and says we get our ideas from sensation by association. But it can be shown that Condillac had not overlooked association. I find Dugald Stewart remarking, "Condillac's earliest work appeared three years before the publication of 'Hartley's Theory.' It is entitled '*Essai sur l'Origine des Connaissances Humaine, Ouvrage où l'on réduit à un seul principe tout ce qui concerne l'entendement humain.*' This *seul principe* is the association of ideas. The account which

both authors give of the transformation of sensations into ideas is substantially the same" (*Dissert.*, P. ii., S. 6). But the truth is, both had been anticipated by Hutcheson, who had expounded the general doctrine, and by Hume, who had used the doctrine of associations to account for beliefs supposed to be innate. Certain it is, that Condillac speaks of association of ideas which are the effect of a foreign impression: "Celles-la sont souvent si bien cimentées, qu'il nous est impossible de les détruire." "En général les impressions que nous éprouvons dans différentes circonstances nous font lier des idées que nous ne sommes plus maîtres de séparer." Mr. Mill will, I believe, be astonished to find here his father's law of Inseparable Association. Not only so, but he accounts by this law, like Mr. Mill, for what is supposed to be *inné ou naturel* (see "Connaissances Hum.," c. ix.). I doubt much whether Mr. Mill is entitled to assume such airs in denouncing the sensational school of France. His ideas, generated out of sensation by association, do not differ so widely after all from the "transformed sensations" of Condillac. Both philosophies, when we trace them sufficiently far down, are found to rest on nothing more solid than sensations with their associations; only Mr. Mill is driven at times to bring in something inexplicable, of which nothing can be known. Let Mr. Mill's philosophy have as long time to work as that of Condillac had, from the middle of last century to the French Revolution, and through the imperial sway of Bonaparte, and I believe that "sensation *plus* association" will not be found to have any more elevating effect on prevailing thought and sentiment than "transformed sensations" had; only I cherish the hope that in this country the tendency will be counteracted by the higher philosophy and theology still abiding among us.

ARTICLE II. *Mr. Mill's Theory of Mind.* (pp. 88–111.)

It falls in with the order of my examination to begin with his account of mind, which he had resolved into "a series of feelings with a background of possibilities of feeling," requiring the farther statement that it is "a series aware of itself as past and future." He had acknowledged that this "reduces us to the alternative of believing that the Mind, or Ego, is something different from any series of feelings or possibilities of them, or of accepting the paradox that something which, *ex hypothesi*, is but a series of feelings, can be aware of itself as a series;" that his theory on this subject has "intrinsic difficulties, and that he is here face to face with a final inexplicability." Now he has told us (*Logic*, III. iv. 1), that "the question, What are the laws of nature? may be stated thus: what are the fewest and simplest assumptions which, being granted, the whole existing order of nature would result?" Now I believe that the single and simple assumption to be made on this subject is, that in every conscious act there is a knowledge of self as acting, and in every remembrance of a past experience of self, as having had the experience. Here we are face to face with a final fact, which needs no explicability. But Mr. Mill will not state it thus, and he is flitting round and round the point without alighting on it. He affirms that there "is no ground for believing that the Ego is an original presentation of consciousness." Now I admit that an abstract Ego is not given in self-consciousness; but the concrete Ego is; that is, the Ego as thinking, feeling, or in some other act. He allows, in his new edition, that he does not profess to have adequately accounted for the belief in mind. Let us see how he seeks to bear up his theory in the Appendix which he has added:—

"The fact of recognizing a sensation, of being reminded of it, and, as we say, remembering that it has been felt before, is the simplest and most elementary fact of memory; and the inexplicable

tie or law, the organic union (as Professor Masson calls it), which connects the present consciousness with the past one, of which it reminds me, is as near, I think, as we can get to a positive conception of Self. That there is something real in this tie, real as the sensations themselves, and not a mere product of the laws of thought, without any fact corresponding to it, I hold to be undubitable." "Whether we are directly conscious of it in the act of remembrance, as we are of succession in the fact of having successive sensations, or whether, according to the opinion of Kant, we are not conscious of self at all, but are compelled to assume it as a necessary condition of memory, I do not undertake to decide. But this original element, which has no community of nature with any of the things answering to our names, and to which we cannot give any name but its own peculiar one without implying some false or ungrounded theory, is the Ego or Self. As such, I ascribe a reality to the Ego — to my own mind — different from that real existence as a Permanent Possibility, which is the only reality I acknowledge in matter." "We are forced to apprehend every part of the series as linked with the other parts by something in common, which is not the feelings themselves any more than the succession of the feelings is the feelings themselves; and as that which is the same in the first as in the second, in the second as in the third, in the third as in the fourth, and so on, must be the same in the first and in the fiftieth, this common element is a permanent element. But beyond this, we can affirm nothing of it except the states of consciousness themselves."— (pp. 256, 257.)

There are plenty of assumptions and admissions in this passage, far more than the defender of intuitive psychology is obliged to make. There is an "original element," to which he ascribes a "reality," and a real existence; a "permanent element," something common to the feelings, "which is not the feelings themselves;" the same in the first and fiftieth state of consciousness, and to which we can give no other name than the Ego, or Self. Now what is this but the permanent mind or Ego of the metaphysicians, with its various modifications, revealed by consciousness? I certainly do not stand up for the doctrine of Kant, according to whom we are not conscious of self, but are required to assume it as a condition. I prefer a much simpler doctrine, — that we are

conscious of self in every mental act, conscious of self grieving in every feeling of grief, of self remembering in every act of memory. Admit this clearly and frankly, and I am satisfied. But I am satisfied because in this we have two great truths, — that man knows, and that he knows real existence, that is, self, as existing. But the disciple of the doctrine of Nescience — that is, of the doctrine that we can know nothing of the nature of things — ever draws back from such a plain statement, as inconsistent with his favorite theory; and he talks instead of an "inexplicable tie," or "law," or "organic union," or "link to connect the facts,"— language which is metaphorical at the best, and never does express the fact, which is a very simple one, though full of meaning.

We are here at the place where Mr. Mill is in greatest difficulties, and feels himself to be so. He tells us that "the one fact which the Psychological Theory cannot explain, is the fact of Memory (for Expectation I hold to be, psychologically and logically, a consequence of Memory)." I have shown, I think, that he is for ever assuming, without perceiving it, other primordial facts; and that there are other facts equally entitled to be regarded as primordial, and, on the same ground, "no reason can be given for it which does not presuppose the belief, and assume it to be well grounded." But let us specially inquire, What is involved in the assumption of memory? I had objected, that Mr. Mill was not able to give an account of the genesis of the idea which, as consciousness attests, we have of Time. Let us look at the account he now gives of the idea (p. 247), and then we shall be prepared to look at the way in which he generates it. He tells us that by Time is to be "understood an indefinite succession of successions." This does not make the matter clearer; the more so, as he has no things to succeed each other except sensations, which are only for the moment. "The only ultimate facts or primitive elements in Time are Before and After, which (the knowledge of opposites being one) involve the notion of Neither before nor after — *i.e.*, simultaneous." I do not look on this account as a correct one

of the facts of our experience. We get the idea of Time as a primitive fact in memory: we remember every event as happening in time past, and can then abstract the time from the event. I certainly do not give in to the principle that "the knowledge of opposites is one," for I hold that the knowledge of opposites is the knowledge of opposites, — that is, of things opposed; and I do not allow that Before and After are opposites: they are rather continuous. But we are more interested to inquire, What account does he give of our idea and conviction as to this infinite Succession of Successions; this Before, and After, and Simultaneous? His answering is hesitating, and it is unsatisfactory. It brings out the weak points of the theory, and the awkwardness of the attempt made to bolster it up. He admits, "I have never pretended to account by association for the idea of Time." "Neither do I decide whether that inseparable attribute of our sensations is annexed to them by the laws of the mind or given in the sensations; nor whether, at this great height of abstraction, the distinction does not disappear." He admits that Time is the inseparable attribute of our sensations. He admits that we have the idea. We ask, Whence it comes? Let us look at the alternatives between which he hesitates. Our idea of Time "may be given in the sensations themselves." Observe how he is giving to the sensations a new and a totally diverse element, in the very manner of the school of Condillac. An idea implying indefinite successiveness, — a Before and an After, — all given in sensations, which we thought were confined to the present!! Surely this beats anything found in the "shallowest set of doctrines ever passed off upon a cultivated age," and "which consisted in merely *calling* all states of mind, however heterogeneous, by that name," — that is, the name of sensations. If he take the other alternative, then he is giving to the mind the power of generating in the course of its exercise, a totally new idea — a view utterly inconsistent with his own empirical theory, and the very view of Leibnitz, who makes *intellectus ipse* a source of ideas. No wonder that he

seems unwilling to be fixed on either horn, and would fain mount up into some height of abstraction, where the distinction may disappear. But the facts do not lie in any great height of abstraction, but in the low level of our every-day consciousness, and can be expressed only by giving sensation its proper place, and time its proper place, both being equally primordial facts.

ARTICLE III. *Mr. Mill's Theory of Body.* (pp. 112–158.)

I now come to a more perplexing subject, in which I admit there is room for difference of opinion, though no room for that of Mr. Mill; that is, the idea and the conviction which we have in regard to Body. As the conclusion of his subtile disquisitions, he had defined Matter as the Permanent Possibility of Sensation. In the added Appendix, he declares clearly that there is no proof that we perceive it by our senses, or that the notion and belief of it come to us by an original law of our nature; and that "all we are conscious of, may be accounted for without supposing that we perceive Matter by our senses, and that the notion and belief may have come to us by the laws of our constitution, without being a revelation of any objective reality."

He admits (p. 245) that his opponents have referred his theory to the right test, in aiming to show that "its attempt to account for the belief in matter implies or requires that the belief should always exist as a condition of its own production. The objection is true, if conclusive." But he adds, "They are not very particular about the proof of its truth; they one and all think their case made out, if I employ in any part of the exposition the language of common life." I deny for myself that I have tried to make out my case by such an argument. I have indeed expressed a wish that he would "employ language consistent with his theory, and we should then be in a position to judge whether he is building it up fairly." I believe that any plausibility possessed by it is derived from his expressing it in common language, which

enables him to introduce, surreptitiously and unconsciously, the ideas wrapt up in it. When he and Mr. Bain speak of "a sweep of the arm," and "a movement of the eye," it is difficult for others, perhaps even for themselves, to think of the arm and the eye as mere momentary sensations, as unextended, and as not moving in space. I was convinced that if the theory were only expressed in language not implying extension in the original sensation, its insufficiency would at once be seen. He has now, in a long appendix, labored to construct his theory in language consistent with it, and the baldness of it at once appears.

My objection proceeded on a far deeper principle than the language employed by Mr. Mill. I appealed to consciousness, not as Hamilton would have done, to settle the whole question at once, but to testify to a matter of fact, which Mr. Mill would admit to fall immediately under its cognizance. Consciousness declares that we have now an idea of something extended; extended on three dimensions, — length, breadth, and depth; and, I may add, of extended objects moving in space. It is admitted, then, that we have this idea, and I defy Mr. Mill to revolve this idea into any element allowed by him, — in fact, into any element not involving extension. He tells us that the whole variety of the facts of nature, as we know it, is given in the mere existence of our sensations, and in the laws or order of their succession. But from which of these does he get extension? Surely not from mere sensation, which, as not being extended, cannot give what it does not possess. As certainly not from laws or order in successive sensations, which, as they do not possess it individually, cannot have it in their cumulation, any more than an addition of zeros could give us a positive number. We have one more primordial fact, not only not accounted for by his theory, but utterly inconsistent with it.

We must examine his account of matter a little more narrowly. It is a possibility of sensations. Whence this dark background of possibilities which he cannot get rid of, which he cannot get behind, to which, indeed, he cannot get

up? To account for the phenomena, he says, they come in groups, and by rigid laws of causation. Whence these co-existing groups and unvariable successions? Do they come in obedience to mental laws, say, to the laws of association? These laws are represented by him as being contiguity and resemblance. Do these create the groups and successions? I scarcely think that Mr. Mill will assert that they do. I remember when travelling in the midst of a group of sensations called the Alps, thinking only of my wretchedly wet condition, I was suddenly startled by a group and succession of sensations such as I had never experienced before, and which I referred to an avalanche falling a mile off. Whence this effect? It was not produced by any volition of mine. Surely, Mr. Mill will not argue that it was produced by contiguity or resemblance, or any of the known laws of association. Whence, then? If he says something within me, then I say we have here a set of laws of a very curious and complex character, unnoticed by the theorist. But it can be shown that the facts cannot be explained by laws within me. The law of cause and effect is, that the same co-existing agencies are followed by the same consequences. But I might be under the same group of sensations as I was when the avalanche fell, without the sounds which I heard following. Does not this require us to posit something out of the series of sensations to account for the phenomena in the series; and this something obeying laws independent altogether of our sensations and associations. If we once posit such an external, extra serial agency, we cannot withdraw it when it becomes inconvenient; we must go on with it, we must inquire into all that is involved in it by the laws of induction. This was the argument that convinced Brown, — who, however, called in to guarantee it an intuitive conviction of cause and effect, that there must be an external world. Whether the argument is convincing, on the supposition that the belief in causation is not intuitive, I will not take it upon myself to say. I am not sure that the infant mind could arrive, in the midst of such complications, at a knowledge of

the law of cause and effect. Finding many sensations not following from any law in the mind, it could not, I believe, reach a law of invariable succession. But then, it is said, it would refer them to something out of the mind. But with an experience only of something *in the mind*, how could it argue any thing *out of the mind*, of which outness it has as yet no idea in the sensations or order of sensations? Would it not, in fact, be shut up in the shell of the Ego, and find in that Ego most of its sensations without a cause? Or rather, would not an infant mind, endowed with only the powers allowed by Mr. Mill, speedily become extinguished? But if it could live, and discover the law of cause and effect, as Mr. Mill thinks, that law seems to require us to believe in an external something, obeying laws of co-existence and succession independent of the series of sensations, and we should have to take this with all its logical consequences. This gives us Matter not as a possibility of sensations, but an external something obeying laws of co-existence and succession, and the cause of sensations in us.

The theory would, after all, be utterly inadequate, for it would not account for the most prominent thing in our conception of matter; namely, that it is extended, which we could never argue, or apprehend, or even imagine, if we knew it merely as the cause of unextended sensations. I therefore reject it entirely. But the consequences I have sketched in last paragraph follow, if we adopt the theory. Under this view, I was entitled to point out an oversight in Mr. Mill's account of the properties of matter, which he represents as being resistance, extension, and figure; thus omitting, I said, those powers mentioned by Locke, by which one body operates upon another. "Thus the sun has a power to make wax white, and fire to make lead fluid." When I said so, I had entered a good way, notwithstanding his insinuation to the contrary, into the cloud of Mr. Mill's mode of thought, — farther, perhaps, than I was welcome. He now, in replying to me (p. 248), is obliged to talk of one group of possibilities of sensations, "destroying or modifying another such

group;" and this certainly not by laws of sensation or association, but by laws acting independently of any discoverable cause in the series which constitutes mind. We have now got, by logical consequence, from Mr. Mill's theory, a considerably complicated view of Matter, as a group of causes obeying laws of co-existence and unconditional succession, and one group influencing another, or destroying it, and all independent of any volitions of mine, or laws in my mind. The idea is, after all, inadequate, as it does not include extension; but it is certainly utterly inconsistent with his theory, that the notion and belief of Matter "may have come unto us by the laws of our constitution, without being a revelation of any objective reality."

This is confirmed by the language he uses in answering Mr. O. Hanlon. He admits "that there is a sphere beyond my consciousness;" and "the laws which obtain in my consciousness also obtain in the sphere beyond it." This, of course, refers to our conviction as to there being other minds as well as our own (p. 253). I am not sure that his argument for the existence of such minds is conclusive.

"I am aware, by experience, of a group of Permanent Possibilities of Sensation, which I call my body, and which my experience shows to be an universal condition of every part of my thread of consciousness. I am also aware of a great number of other groups, resembling the one that I call my body, but which have no connection, such as that has, with the remainder of my thread of consciousness. This disposes me to draw an inductive inference, that those other groups are connected with other threads of consciousness, as mine is with my own. If the evidence stopped here, the inference would be but an hypothesis, reaching only to the inferior degree of inductive evidence called Analogy. The evidence, however, does not stop here; for, having made the supposition that real feelings, though not experienced by myself, lie behind these phenomena of my own consciousness, which, from the resemblance to my body, I call other human bodies, I find that my subsequent consciousness presents those very sensations, of speech heard, of movements and other outward demeanor seen, and so forth, which, being the effects or consequents of actual feelings in my own case,

I should expect to follow upon those other hypothetical feelings, if they really exist: and thus the hypothesis is verified. It is thus proved inductively, that there is a sphere beyond my consciousness: *i.e.*, that there are other consciousnesses beyond it; for there exists no parallel evidence in regard to matter."

Now, I am not sure that an infant mind, with only the furniture allowed by Mr. Mill, and without a knowledge direct or by legitimate inference of body, and apart from an intuitive law of cause and effect, could conduct such a process. The actual attainments of every mature mind show, by a legitimate inference, that there must be more capacities and inlets of ideas than Mr. Mill supposes. But, passing this, let us examine the legitimacy of the process. There is first the difficulty, already urged, of getting out of the sensations which have no outness, to the conception of an "outer sphere." Then, is it not conceivable that the notion and belief in regard to other people's mind may have come to us by the laws of our constitution, without implying any objective reality? And if so, are we not, by the law of parcimony, shut up to a solitary egoism as the more philosophical theory? that is, I may look on myself as a series of sensations aware of itself, with possibilities of sensation in groups and successions, among which I place what would be called, in the language I employ, my fellow-creatures. No doubt, another hypothesis may be made, and seems to have its verifications; but the simple hypothesis, which explains all by the laws of my constitution, is to be preferred, if it explains the phenomena of other people's minds, as I believe it to do quite as satisfactorily as it does our notion of and belief in Matter. If we draw back from this, and stand upon the hypothesis and verification, then I urge that a like process requires me to postulate, that these groups of possibilities in my body and beyond it have an objective reality independent of me, and obeying laws of their own, and not laws of my constitution. Of the conceivable conclusions reached, Mr. Mill's seem to me the most hesitating and incongruous. He must, I suspect, either logically remain for ever within the sphere

of the Ego, with possibilities he knows not what; or, if he once go beyond it, he must include not only other minds, but material objects following laws independent of our subjective constitution or perceptions.

ARTICLE IV. *Experimental Physiological Cases.* (pp. 152–180.)

We have now to look at the attempts which Mr. Mill has made to turn aside the force of the reported experimental cases which I had urged against him. To prove that the eye is immediately cognizant, not merely of color, but of surface, I had adduced the case reported by Dr. Franz, of Leipsic, which Mr. Mill seems never to have heard of before, though it was given in the Transactions of the Royal Society for 1841. A youth born blind had his sight restored at the age of seventeen; and when a sheet of paper, on which two strong black lines had been drawn, the one horizontal and the other vertical, was placed before him at the distance of about three feet, on opening his eye, "after attentive examination, he called the lines by their right denominations." What? asks Mr. Mill. It is clear he called them horizontal and vertical, having got the terms by his mathematical education, and knowing what were the things by the sense of touch. Mr. Mill allows (pp. 287–290) that this case, if fairly reported, would require a considerable modification of his doctrine, and that it looks like an experimental proof, that something which admits of being called extension "may be perceived by sight at the very first use of the eyes." But he tries to throw doubts on the accuracy of the report, evidently because it runs counter to his theory. It is a suspicious circumstance, he says, that the youth knew a cube and a sphere placed before him not to be drawings, of which he could have no idea, — as if he could not have had some idea of what persons seeing meant by drawings, through the descriptions which they had given. And if there be any truth in the case at all, it is clear that the youth perceived at once vertical and horizontal lines, squares, circles, triangles, and the difference between the

cube and the sphere. Mr. Nunneley's case proves the same thing: the boy could at once perceive "the differences in the shape of objects," though he could not tell, as to the cube and the sphere, which was which. It appears that, in this case, it was some time before the boy could identify his perceptions of touch with those of sight. This is in accordance with what I have stated. The youth in Dr. Franz's case could do it more rapidly than the boy in Nunneley's case, because the former had a mathematical training; but even he required examination and consideration, so that the two cases exactly correspond. There is nothing odd in the circumstance that Franz's youth could not form, from what he saw, "the idea of a square and disc, until he perceived a sensation of what he saw in the points of his fingers, as if he really touched the object;" for it was thus he identified the perceptions which he was now receiving with those which he formerly had. Mr. Mill will only admit after all, that, though the youth is reported as seeing lines, circles, triangles, yet this "does not prove that we perceive extension by sight, but only that we have discriminative sensations of sight corresponding to all the diversities of superficial extension;"—as if Hamilton had not demonstrated that discriminate sensations of color imply the perception of bounding lines, and therefore of figure. I do not know if the history of speculative philosophy affords a more startling case of the determination of a theorist not to found his theory on facts, but to twist the facts to suit his theory, which he is determined to adhere to at all hazards.

This may be the proper place for referring to the now famous case of Platner, which both Hamilton and Mill have been using, but which in fact helps neither, and perplexes both. Platner, without giving a detail of the facts, comes to the conclusion that "touch is altogether incompetent to afford us the representation of extension and space, and is not even cognizant of local exteriority," and that a person born blind could have no idea of extension. These observations do not agree with those of any other person I am acquainted with. Mr. Mill was obliged to say, that Platner "had put a false

color on the matter, when he says his patient had no perception of extension." He now tells us that he does not agree with Platner, that "the notions of figure and distance come originally from sight" (p. 280). But if Platner's case does not prove this, it proves nothing. I believe it does prove nothing. It is quite inconsistent with the simple experiments, which, with the aid of Mr. Kinghan, I wrought on young children born blind. I have an idea that Platner was led astray by not distinguishing between the idea of extension, which is original both to sight and touch, with the power of measuring it, which is acquired. Mr. Mill admits all that I claim, and all that Platner denies, "that a person born blind can acquire, by a mere gradual process, all that is in our notion of space, except the visible picture," that is, the color in the picture.

To show that we intuitively know our bodily frame as extended, by the sense of touch, I had quoted at length from the cases adduced by Müller. According to that illustrious physiologist, we localize our affections received by the senses; and the law of our nature is, that, in touch or feeling, we place the sensation at the spot where the nerve normally terminates. It is thus, I believe, that we acquire a knowledge of our frame as having one part out of another, and as extended. All this I hold to be original and intuitive, — so strongly so, that persons who have their limbs cut off, have, ten or twenty years after, a sense of the integrity of the limb. Mr. Mill says he can explain this by association of ideas. I deny that he can; for surely such a length of time was sufficient to destroy the old association, which had nothing to keep it alive, and to create a new one. He tells me, that, according to my theory, the pain should have been felt in the stump. I believe, on the contrary, that, after so long an experience without a limb, this should have been the case, according to Mr. Mill's theory. My theory — no, not my theory, but Müller's — is, that there is an original law which leads us to localize the affection at the spot where the nerve in its healthy and proper action terminates. When, in the

restoration of a nose, a flap of skin is turned down from the forehead, and made to unite with the stump of the nose, the new nose thus formed has, as long as the isthmus of skin by which it maintains its connections remains undivided, the same sensations as if it were still in the forehead. This, Mr. Mill says, should not be, according to my theory; and there is a good deal of self-complacent chuckling over me, as if my facts overthrew my theory. This implies a misunderstanding of the facts. According to the law, as I have expounded it, as long as the nerve is imbedded in the isthmus of skin taken from the forehead, it should be felt in the forehead. Mr. Mill takes care not to quote the further fact, that is, "when the communication of the nervous fibres of the new nose with those of the forehead is cut off by the division of the isthmus of skin, the sensations are of course no longer referred to the forehead; the sensibility of the nose is at first absent, but is gradually developed." According to the association theory, the affection should have been felt in the forehead, not till the isthmus was cut, but till the old association was gone; and this, according to Mr. Mill, might not have been for twenty years. Be it observed, that, when the flesh is cut off from the forehead, and the nerve comes to have its normal position in the nose, the sensation is felt there. My theory is thus simply the expression of the facts. But whatever doubt there may be about these phenomena, there can be none about other facts which I have adduced. Whatever dispute there may be as to cases in which there has been an association formed between a limb once existing but now lost, there can be none as to persons who never had the limb, and in whose case the association could not have been formed, but who are reported as having a sense of it. Professor Valentin mentions cases which I have quoted, which show, "that individuals who are the subjects of congenital imperfection, or the absence of the extremities, have, nevertheless, the internal sensations of such limbs in their perfect state." It is curious that Mr. Mill has taken no notice of these decisive cases which I have adduced as setting the whole question at rest.

Mr. Mill dilates on two cases, to which I have referred without attaching much importance to them. The shrinking of the frame when boiling liquid is poured down the throat, seems to show that we localize the pain at a spot of which we cannot know the site by touch or experience. Mr. Mill thinks the action purely automatic (p. 303). Now I am disposed to think that there may be an action of the will directed to the seat of sensation. I believe that at a very early age, and long before they have any acquired perceptions of locality, they will indicate vaguely the seat of the pain. My instance may not be the best, it is rather negative: "if a child is wounded in the arm, it will not hold out the foot." This should not be construed as meaning that the infant will systematically hold out its foot; for this would suppose that it has much more knowledge than it can yet have of mother or doctor watching it. But at an early age, there are apparently voluntary movements which enable the mother and doctor to discover the seat of the pain. I agree with Mr. Mill, "there are some difficulties, not yet completely resolved, respecting the localization of our internal pains, for the solution of which we need more careful and intelligent observation of infants." The question is set at rest, not by such a case, which I am prepared to abandon, if disproven, without the least injury to my argument, but by the fact reported by Professor Valentin, which Mr. Mill has declined to notice.*

* In a foot-note I had uttered a sentence in regard to a case quoted by Mill from Hamilton, who gets it from Maine de Biran, who takes it from a report of Rey Regis in regard to a patient, who, though he retained a sense of pain, had lost the power of localizing the feeling. I pronounced the case "valueless, as evidently the functions of the nervous apparatus were deranged." Mr. Mill allows that this single case is not conclusive (p. 295); and with this I would have been satisfied, had he not gone on to argue from it that "localization does not depend on the same conditions with the sensations themselves." Be it so; in the normal state, the nerves localize the feeling. "The patient, as he gradually recovered the use of his limbs, gradually also recovered the power of localizing his sensations." I do not attach much importance to the following reports of the experience of insane persons; but they are worthy of being mentioned, as showing how intimately our abiding perception of our bodily frame is bound up with the *skin sense* and its localizing tendency. "A woman," whose case Esquirol tells, "had complete anæsthesia of the surface of the skin: she believed that the devil had carried off her body. A soldier who was severely

Mr. Mill thinks that the eye originally gives us only color and not extension. He does not allow — though the cases now adduced seem to prove it — that we have original perceptions of our bodily frame as affected. How, then, according to him, do we get the idea of extension? Following Dr. Brown, he thinks that we get it by the sweep of the arm in space; and he quotes, with approbation, Professor Bain's method of working out this hypothesis. In my *Examination of Mill*, I endeavored to meet this by psychological considerations, and showed that a sweep of the arm or leg, considered merely as a group of sensations without extension, could not give us the idea of extension. I was not aware then that a German metaphysician, in examining the theory of Brown, had entirely disproved it by an experimental case. According to this theory, a person born without arms or legs could have no idea of space; but Schopenhauer has brought forward the case of Eva Lauk, an Esthonian girl fourteen years old, born without arms or legs, but who, according to her mother, had developed herself intellectually quite as rapidly as her brothers and sisters, and without the use of limbs had reached a correct judgment concerning the magnitude and distance of visible objects quite as quickly as they.* Such a fact as this undermines the theory of the mode in which we gain our idea of extension, and with it the whole philosophic superstructure which Mill and Bain have been rearing with such labored and ill-spent ingenuity. The cases adduced by Müller, and that reported by Franz, show how it is we get our idea of extension; we get it by the immediate perception of our bodily frame in

wounded at the battle of Austerlitz considered himself dead from that time; if he were asked how he was, he invariably replied, that 'Lambert no longer lives; a cannon-ball carried him away at Austerlitz. What you see here is not Lambert, but a badly imitated machine,' — which he failed not to speak of as *it*. The sensibility of his skin was lost." — MAUDSLEY: *Physiology and Pathology of the Mind*, p. 242.

* My attention was called to this case by Mr. Bleeck, in his *Mr. J. S. Mill's Psychological Theory*. It is quoted by Schopenhauer in his *Die Welt als Wille*, vol. ii. c. 4, and is taken from *Frorieps Neue Notizen aus dem Gebiete der Natur*, July, 1838.

feeling, and, by means of the eye perceiving the colored and extended surface before it. There is an impression among many that somehow Mr. Mill and Mr. Bain have physiology on their side. I confidently affirm that their peculiar philosophy is not supported by a single reported case, and that most of the reported cases are entirely against them.

ARTICLE V. *Can Association generate New Ideas?* (pp. 190–207, 218–224.)

I now turn to the discussion of a point of perhaps greater importance than any other started by Mr. Mill's philosophy. It relates to the power of association to generate new ideas, and to produce belief, — in fact, to take the place of judgment or the comparison of things. It is, perhaps, the most fatal of all the errors in Mr. Mill's speculations. It was on this account I dwelt so much on it, — more than any other of Mr. Mill's critics.

The two principal elements out of which Mr. Mill generates all our ideas, are sensation and association. I have found fault with him for never telling us what is involved in sensation. We have seen in this paper that he is not sure whether time may not be involved in it, — a view which would entirely change its nature. He never sees what is really involved in sensation, which is never felt except a sensation of self. But I have a still greater complaint against him for never telling us precisely what association can do, and what it cannot do. He everywhere ascribes to it, in language derived from material action, a *chemical* power: two ideas coming together may generate a third, different from either of the original ones. This is making association a source of new ideas. In other words, he gives to mere association a power which the *a priori* philosophers have given to the intellect; and surely with much more justice, for even on the supposition that association is the occasion of the new idea, the new idea must proceed from some mental capacity joined with association. Mr. Mill does not render any account of

the law, and the limit of this power, supposed to be in association. It is a chemical power, but then the chemist can tell us what is the nature and the law of the chemical power; he says, Put one proportion of oxygen and another proportion of hydrogen in a certain relation, and water is the product. But Mr. Mill never ventures to express any such definite law; he leaves every thing vague and loose. He finds certain peculiar ideas in the mind, such as those we have in regard to beauty and moral good; and he satisfies himself with saying that they are generated by sensations and ideas, which have in themselves no such qualities. I see no reason which he has for claiming for his system of generalizing ideas out of sensation by associations, such a superiority over Condillac's "transformed sensations."

I have denied that association is ever a source of new ideas. I have admitted that as the issue of "long and repeated conjunction, ideas, each it may be with its own peculiar feeling, succeed each other with incalculable rapidity, so that we cannot distinguish between them, and that they may coalesce in a result." "But in the agglomeration there seems to be nothing but the ideas, the feelings, and their appropriate impressions coalescing; there is no new generation — no generation of an idea, nor in the separate parts of the collection." At this point Mr. Mill meets me (pp. 342–3). He is obliged to concede that "facts in the case of ideas cannot be appealed to, for they are the very matter disputed." It clears the ground very much to have this admission. It is implied that there are new ideas generated by the action of the mind; and Mr. Mill ascribes to association what our profounder philosophers have ascribed to the intellect, — making their case more parallel to that of the chemists, who give to their elements a chemical power quite different from the mechanical. Not able to get proof from ideas, he says, "There are abundant instances in sensation."

"I had thought," he says, "that such an experiment as that of the wheel with seven colors, in which seven sensations following one another very rapidly, become, or at least

generate one sensation, and that one totally different from any of the seven sufficiently proved the possibility of what Dr. M'Cosh denies; but he writes as if he had never heard of the experiment;" and he refers to the ribbon of light produced by waving rapidly a luminous body. Now, it so happens that I had produced the ring when a boy, by a lighted piece of paper; in my college days, I had seen the experiment of the seven colors; and in my mature life, I have seen a wheel in rapid motion appearing stationary when made visible by instantaneous electric light. But I looked on these as experiments, not in regard to mental states, but simply about light, and the way in which it affects our bodily organs. The wheel under electric light looks stationary, not as the result of successive sensations of motion, for we have not been percipient of the motion, but because we see it only for the instant. In the ribbon of flaming color, the impression produced by each of the rays lingers for a certain short time, till the impression produced by those that rapidly follow mixes with it, and the figure on the retina becomes a continuous circle. In the same way with the seven colors, the organic affections mingle and become one, and are transmitted as one to the mind, which ceases to have a sensation of the seven colors, and has the sensation of one. This is not a case of seven separate mental sensations generating a new one. As long as the wheel with the seven colors rotates slowly, so that there is time for the one set of rays to disappear from the retina before the other overtakes them, there are seven sensations, but no eighth generated by the seven. If the wheel is seen by instantaneous light, seven colors are seen, but no eighth. Mr. Mill has stated the facts precisely in an analogous case furnished by the sense of hearing (p. 618): "When a number of sounds in perfect harmony strike the ear simultaneously, we have but a single impression, — we perceive but one mass of sound." Mr. Mill was bound to produce a case of two or more separate mental affections producing a new one never before experienced; and he has produced simply a case of the blending

of rays of light in retinal or nervous action. Again facts fail him, and he is left with a baseless hypothesis.

ARTICLE VI. *Impossibility of reaching Positive Truth.* (pp. 224–230.)

This brings us to the consideration of the now notorious examples which he adduces of the most certain principles of arithmetic and geometry being believable in other circumstances: that is, in the possibility of our believing that 2 + 2 may be 5; that parallel lines may meet; that any two right lines being produced will meet at two points; and that two or more bodies may exist in the same place. These cases are taken from *Essays by a Barrister*, who did not profess to be a metaphysician, who did not know what to make of them, except that he thought they were fitted to lessen our assurance of the certainty of objective truth. Mr. Mill now makes the following singular addition to his statement of the two first of these cases: "Hardly any part of the present volume has been so maltreated by so great a number of critics, as the illustrations here quoted from an able and highly instructed contemporary thinker; which, as they were neither designed by their author, nor cited by me, as any thing more than illustrations, I do not deem it necessary to take up space by defending. When a selection must be made, one is obliged to consider what one can best spare" (p. 87). This is surely far from satisfactory. Does, or does he not, give up the cases? If he does, he should have said so in all honesty, and nobody would have thought the less of him. But he seems still inclined to retain them as illustrations, but does not think it necessary to defend them. I do hold, that Mr. Mill's principles do lead to these consequences, which have staggered so many, and made them review the principles which lead to such results, — implying that man can reach no truth which might not be falsehood in other circumstances. But as Mr. Mill does not care to defend them, I do not feel that I am called to continue my assault.

"The geometry of visibles has been noticed only by Dr. M'Cosh, who rejects it as founded on the erroneous doctrine (as he considers it), that we cannot perceive by sight the third dimension of space." This is not a full statement of the ground of my rejection. My language is, "These inferences can be deduced only by denying to vision functions which belong to it, and ascribing to it others which are not intuitive or original." I hold it to be one of the functions of sight to give us a right line and a curved line. Such cases as those of Franz clearly show, that by sight alone we can perceive two straight lines; and, having once seen them, we never could be made to believe that they could meet at two points and enclose a space; or that a straight line being continued could return itself again. Those who see colors must perceive the boundaries of colors, and these being often curved, would give us the idea of a curved line; and I am sure they would be obliged to look on a straight line returning into itself as a curve, and not a right line. So much for his denying to vision functions which belong to it, which was my main argument. But again, he ascribes to it functions which are not intuitive or original; for I hold that it is not the function of vision, but of touch, to reveal to us impenetrability; and a creature with sight, but not touch (even if it could live or reason at all), could argue nothing as to bodies either penetrating, or not penetrating, each other, or passing through each other, "without having undergone any change by this penetration."

In looking at these acknowledged consequences, I had ventured to point out the dangerous tendency of a doctrine which strips man of the power of reaching positive truth, and of pronouncing judgment on the reality of things. Because I have done so, he represents me as "preaching;" but preaching to one who is "already converted," "an actual missionary of the same doctrine." I am here tempted to remark, that Mr. Mill himself "preaches" at times, as in those passages in which he charges Dr. Mansel's doctrines as being "simply the most morally pernicious doctrine now current," and hurls

at him that tremendous passage, "I will call no being good who is not what I mean when I apply that epithet to my fellow-creatures; and if such a being can sentence me to hell, for not so calling him, to hell I will go." My preaching on this occasion has evidently had some effect; it has hit a point in which Mr. Mill seems to be sensitively tender. I am convinced that he has never seriously weighed the logical and practical tendency of his doctrine of nescience; it looks as if there are times when he is unwilling to look at the consequences. He tells us that, in his *Logic*, he has been instructing his readers to form their belief exclusively on evidence. But did he never hear a preacher waxing longest and loudest on the points of his doctrine which he felt to be the weakest and most vulnerable? In regard to ordinary mundane matters, Mr. Mill is very careful to bid us look for evidence; but the evidence, in the last resort, is found to be baseless, thus rendering the whole superstructure insecure in the estimation of all who are bent on looking beneath the surface. He corrects Mr. Grote when he seems to say, that truth is to every man what seems truth to him; but his own doctrine is equally unsatisfactory when we follow it to its foundation. "We grant," he says, "that, according to the philosophy which we hold in common with Mr. Grote, the fact itself, if knowable to us, is relative to our perceptions, to our senses, or our internal consciousness; and our opinion about the fact is so too: but the truth of the opinion is a question of relation between these two relatives, one of which is an objective standard for the other" (*Dissert.*, vol. ii. art. Grote's Plato). That is, we are to have witnesses; but our conviction, nay, truth itself, leans on the deposition of witnesses, each of which supports the other, but each of which may be a liar. The earnest and logical mind is made to feel that in all matters bearing on the depths of philosophy, and the heights of religion, and fitted to bear it up above this cold earth, it has nothing left on which to lean.

ARTICLE VII. *Ambiguity of the word Conceive.* (pp. 251–258.)

In my *Examination* I had been at great pains to point out the ambiguity in the word "conceive," and the paronymous words "conception," "conceivable," and "inconceivable." It is of essential importance, if we would avoid senseless logomachy, to determine the meaning in which we employ the phrase when we use man's power of conception as a test of necessary truth, or his incapacity of conception as a test of error. I distinguished three senses of the word: (1) image in the phantasy, as when we picture Mont Blanc; (2) the generalized notion, as "mountain;" (3) native cognition, belief, or judgment, in regard to objects; and I showed that it is only when used in the third sense that it can be legitimately employed as a test of truth. I showed that it was not in this sense that Antipodes were supposed by our fathers to be inconceivable, but because they seemed to be contrary to experience, — a prepossession which gave way before farther experience. I am not aware that any one ever objected to Antipodes on the ground of a native cognition, belief, or judgment. I charged Mr. Mill with taking advantage, of course unconsciously, of the ambiguity of the phrase. Any apparent success which he may have had, in explaining necessity of conception by association, arises solely from his showing how one image suggests another, — how, for instance, darkness suggests ghosts, or a precipice the danger of falling. I was quite aware that Mr. Mill, in answering Hamilton, had shown that the phrase had several meanings; but then, I asserted, that he himself was led astray, and was leading astray his readers, by the ambiguity. As my work was passing through the press, I observed that, in the sixth edition of his *Logic* (I. pp. 303–306), lately published, he had charged Mr. Spencer as deriving "no little advantage" from the ambiguity, and alleges that the popular use of the word "sometimes creeps in with its associations, and prevent him from maintaining a clear separation between the two." I simply noticed this in a foot-note, and added, that Mr. Mill

"continues to take advantage of the ambiguity, which is greater than he yet sees." Mr. Mill thinks this "curious" (p. 88). The note was hastily written, and I admit my meaning was not so clear as I have now endeavored to make it.

ARTICLE VIII. *Mr. Mill's Logical Views.* (pp. 286–371.)

The only subject remaining to be discussed is his defence of his own logical views, and his criticism of mine. He is pleased to say (p. 388), that "the chapter of Dr. M'Cosh, headed the 'Logical Notion,' contains much sound philosophy." But he complains of "the persistent impression which the author keeps up, that I do disagree with him." Now, I believe that our views do disagree, and I was anxious to point out the mistakes in a work which is of such value and influence as Mr. Mill's *Logic*. Mr. Mill is a nominalist, and looks at the name, its denotation, and connotation, instead of the mental exercise; whereas, I am a conceptualist (though, certainly, not in the sense in which many are), and have labored to bring out the process of mind involved in the notion, judgment, and reasoning.

We differ in regard to the General Notion, or Common Term. I hold, that every such notion or term has both extension and comprehension, or intension, — that is, both objects and attributes, — whereas, he looks solely at the comprehension, or the attributes. I had said, that I think it desirable to have a phrase to denote the class of things comprised in the general notion, and that the best word I can think of is Concept. In opposition to this, he says the word "class" is sufficient. But the word class is rather significant of an objective arrangement, existing independent of my notice of it, — say, of the class Rosaceæ, which had an existence in nature before naturalists had observed it, or given a name to it. He admits, that, in order to belief, "a previous mental conception of the facts is an indispensable condition," and "that the real object of belief is the fact conceived." Now,

the word Concept stands with me, not for the class, but for the class conceived, and is the best I can think of. He has a glimpse of the truth when he speaks of extension (p. 421) "as a name for the aggregate of objects possessing the attributes included in the concept." He tells us (p. 372), "that concepts cannot be thought as being universal, but only as being part of the thought of an individual." Here, again, conceive, or "think," used in the sense of image; whereas, it should be employed in the sense of judge. A concept is a notion of an indefinite number of objects (extension) possessing common properties (comprehension), the notion being such as to include all objects possessing the common properties. It is thus emphatically universal.

We differ, also, in regard to Abstract Notions. "It is evident that the existence of abstract ideas — the conception of the class qualities by themselves, and not as embodied in an individual — is effectually precluded by the law of inseparable association." I acknowledge, that, in the sense of "imaging," we cannot have a conception of an attribute apart from a concrete object. But, in the sense of "think of," we can apprehend a part as a part, an attribute as an attribute; and this is what I mean by abstraction. I think it of great moment to distinguish between the abstract and general notions, which the Kantian logicians, German and British, — departing from certain older logicians, — everywhere confound. "Rationality" is an abstract term, denoting an attribute, and is different from "man," which is a general notion connecting objects. By drawing this distinction, and carrying it out consequentially, we throw light on logical judgment, and settle some of the questions discussed in the present day. There are, I hold, judgments in which we compare mere abstracts, and in which there is no general notion involved. Such judgments are always convertible or substitutive (called equipollent by certain older logicians), — that is, we can turn the subject into the predicate, and the predicate into the subject, without any change, which we cannot do in comparing universal notions. Because "men are mortals,"

we cannot say, therefore, "mortals are men;" but if "honesty is the best policy," we can say, "the best policy is honesty," because both terms are abstract.

I have represented Numbers as Abstract Notions, and the judgments involving them as being convertible in consequence. Thus 3×3 being 9, we can say, 9 is 3×3. But Mr. Mill says that the terms are general. "The objects embraced in 9 are nine apples, nine marbles, nine hours, nine miles, and all the other aggregations of which 9 can be predicated. Every numeral is the name of a class, and a most comprehensive class, consisting of things of all imaginable qualities." Now, it was a disadvantage under which I labored in criticising Mr. Mill's "Formal Logic," that I was not able to expound my own views with sufficient fulness. But I have all along explained to my college classes that the same phrase may stand for an abstract and a general notion. I hold, that numerals, 1, 2, 3, are primarily abstract qualities of things, — a quality of that one thing, of these two things, or three things. It is because they are so that the propositions comparing them are convertible. But, then, we very often turn abstract names into general ones (as we also do general ones into abstract ones), and we do speak of 1, 2, 3 as standing for a class. We so employ them when we say, "3×3 *make* 9," which we can only convert by saying, "some things making 9 are 3×3,"—for $6 + 3$ also *make* 9. There is surely a profound distinction here, with far-reaching consequences; but this is not the place for the further development of it.

As not seeing that Extension, as well as Comprehension, is involved in all our general notions, and so in all our judgments involving general notions, Mr. Mill has not been able to give a clear account of the Proposition. He says (p. 420), "all men," and the "class men," are "expressions which point to nothing but attributes; they cannot be interpreted except in comprehension." Now, I have admitted that in the greater number of propositions the uppermost thought and sense are in comprehension, and I am represented as "having

partially just conceptions on the subject." But I hold that, in all judgments of the kind he is speaking of, there is thought in extension, and that they can be interpreted in extension, and have a meaning in extension. When I say, "Gorillas are not men," I mean, are not included in the class men; and in many other propositions the uppermost thought is in extension. Of course, as the one implies the other, the proposition has also a meaning in comprehension.

This is the proper place for correcting a misapprehension of Mr. Mill's, as to what constitutes the principle of identity, which, he thinks, should be expressed thus (p. 466): "Whatever is true in one form of words, is true in every other form of words which convey the same meaning." He applies this to what "Kant terms Conclusions of the Understanding, and Dr. M'Cosh, Implied or Transposed Judgments." "They are not conclusions, nor fresh acts of judgment, but the original expressed in other words." But this is not an adequate account. The law of identity requires that the relation of the things compared should be considered the same, not merely under different expressions, but in different circumstances, positions, and forms. It being given us that "all men have a conscience," we are sure it cannot be true that "no man has a conscience," or that "some men have not a conscience." These are not the same propositions expressed in other words; they would be felt to be true and implied, though not expressed in words at all.

There is one other logical point in which Mr. Mill and I differ theoretically. I hold that in reasoning there is always thought in Extension; always a general principle involved, constituting the major premises when the argument is fully unfolded. In his own Formula, there is a major premise: "Attribute A is a mark of attribute B," which means, when properly interpreted, "Whatever object possesses attribute A has also attribute B," clearly a proposition involving Extension; nay, actually thought of in Extension. It is only when we have such a generalized maxim that the particular case constituting the minor premise warrants the conclusion.

"The gorilla cannot speak;" this cannot give us the conclusion, "the gorilla is not a man," unless we proceed on the general principle that "all beings placed in the class man are possessed of speech." So far as our views bear on the practical evolution of logical formulæ, I believe Mr. Mill and I are at one. We both think that the old logical formulæ, which are in Extension, may be allowed to keep the place which they have had for ages; and we both think that Sir W. Hamilton has done good service to logic by showing us how, when any good purpose is to be served by it, we may turn reasoning in Extension into the form of reasoning in Comprehension. I cannot agree with him, however, when he gives as a reason for allowing the reasoning in Extension to remain, that "concrete language, requiring for its formation a lower degree of abstraction, was earliest formed, took possession of the field, and is still the most familiar" (p. 484). I am not sure that thought in Extension is more concrete than thought in Comprehension. I hold that reasoning is spontaneously in Extension, and that it is thus that the forms assumed this shape, took possession of the field, and are still most familiar. When we argue that "the Red Indians are responsible because they are human beings," we put the major in the form, "human beings are responsible," not because "responsible" is more concrete than "possessing responsibility," but because we must have a general law, and put "all human beings in the class of beings possessing responsibility." The premises as propositions may be thought of primarily in Comprehension, — the Extension, however, being always involved; but in reasoning, the Extension involved must be actually thought of in order to give us the major proposition. The formula in Extension, in the ordinary syllogistic analysis, is thus the expression, not of artificial, but of spontaneous reasoning.

ARTICLE IX. *Mr. Mill's Omissions.*

I have now faced Mr. Mill at all the points in which he has seen fit to meet me.* But I cannot close the discussion without referring to the points at which he has not deigned to meet me. I had said a good deal about his mode of procedure, and criticised his "Psychological Method," showing how it should be adopted only with important explanations and modifications; in particular, that we are at liberty to proceed on this method only on the condition that we carefully look at all that is in the idea, and that we explain it all by the theory. Again, I had shown that Mr. Mill, while seeming to explain all our ideas by sensation and association, had been obliged to call in as many assumed metaphysical principles as Reid and Hamilton. I had collected his admissions into heads; I had shown that they are utterly inconsistent with his apparently association theory; and that, if logically followed out, they must carry him much farther than he is disposed to go. On none of these points does he offer a word of explanation. I had criticised his doctrine of causation, showing that what he explains by experience is not our conviction as to cause and effect, but in the uniformity of nature. I had reviewed with considerable care his very defective account of mathematical axioms and definitions, and of demonstration. I had examined his genesis of our idea of moral good, and his whole utilitarian theory. I had invited him to say whether he thinks a conclusive argument for the existence of God could be constructed on his principles. It is curious that, while he has seen fit to meet me

* I am glad he has called attention (p. 76) to my complaint of the vagueness of the distinction between knowledge and faith. He acknowledges that the distinction, as drawn by me, agrees with the cases to which I have applied it, and says that every definition of belief must include these cases. But, then, he sees a difficulty in carrying it through the entire region of thought. I am satisfied, if it holds good in the region in which I have employed it, that is, in regard to primitive cognitions in which the objects are present, and primitive beliefs, in which we are convinced of their existence, though they are not present. But even in other regions, it calls attention to the circumstance that in our very scientific knowledge there is belief involved, — always, however, with other mental exercises, such as judgment.

on other points, some of them in no way essential to my argument, he has not noticed these all-important criticisms. I am perhaps not justified in arguing that my positions must therefore be unassailable; but it will, at least, be allowed that, since no attack has been made upon them by my acute

III.

PRESENT STATE OF MORAL PHILOSOPHY IN GREAT BRITAIN IN RELATION TO THEOLOGY.[1]

Of all departments of natural knowledge the sciences of the human mind come nearest to religion, and of all the mental sciences Moral Philosophy stands in the closest relation to Christian Theology. The reason is obvious. It is the province of moral philosophy to unfold the laws of man's moral nature; of his motive powers generally, such as the emotions, the will, and especially the moral faculty, or the conscience. Now, the Christian religion is especially addressed to man's moral and spiritual nature. It comes to us as a revelation from God, unfolding and manifesting more fully to us His moral perfections, and making known a means of reconciling man to his Maker, and renewing his soul in the likeness of God. Christian theology, by which I mean a reflex systematic exposition of the truths of God's Word, has ever conducted theologians, whether they wished it or no, into moral discussions; and ethical philosophy has consciously or unconsciously exercised an important influence upon the construction of systems of divinity. The Christian religion has contributed new elements, in particular, all the evangelical graces, to ethics; and a high moral philosophy, specially a high estimate of the law, has ever tended to foster high views of the justice of God, and deep views of the nature of sin, and of the necessity of an atonement. The two have thus acted and re-acted on each other. It may be instructive to consider the present relations of moral philosophy to theology in Great Britain.

In Great Britain, as in France and Germany, we have two contending schools of ethics. These correspond very much,

[1] This paper was read before the triennial Œcumenical Meeting of the Evangelical Alliance, held at Amsterdam, August 1867.

though not altogether, to the two grand schools of philosophy, which have divided Europe since the days of Descartes and Locke—I mean the sensational or experimental, and the *a priori* or rational. The former of these was founded in our country by Hobbes, and has been continued by Hume, by Hartley, and by James Mill, and the living representative of it is Mr. John Stuart Mill. The other school has also had its representatives in Great Britain in such men as Cudworth, Clarke, and Coleridge, and in the Scottish school of philosophers embracing Reid, Stewart, and Sir W. Hamilton; none of them, however, except Coleridge, taking up such high *a priori* grounds as Descartes and Cousin in France, or Kant and Hegel in Germany. Neither of these schools has been in itself either Christian or anti-Christian; there have been believers and there have been unbelievers in both. The tendency of the one has been to materialism, and consequently to a disbelief of the doctrines both of natural and revealed religion. The tendency of the other has been, as we see in Kant and Clarke, to rationalism; or as we see in Spinoza and Hegel, to pantheism.

In our country the tendency of all schools of philosophy has been to become ethical. The sensational school has represented mankind as capable of being swayed by no other motives than those derived from pleasure and pain; its morality is utilitarianism, and its theology, when it has a theology, commonly omits the eternal justice of God, and all the doctrines dependent on it. The other school has certainly been the most favourable to religion and to a high theology. In standing up for something native and necessary in the mind, it has ascribed to man a high moral capacity which at once perceives the distinction between good and evil. Our most eminent ethical writer belonging to this school is Bishop Butler, whose *Sermons on Human Nature*, published in 1726, constitute an era in the history of moral philosophy in Britain. He established, that man has in his very nature and constitution a moral power different from our personal and benevolent affections; and that this power is not only in the mind, but declares itself to be supreme there. Our higher moralists, and in particular the Scottish metaphysicians, have acknowledged their obligations

to him, and carried out his principles. Belonging to this school, we have had in the last age, Chalmers in Scotland and Whewell in England, the latter, however, taking many of his views from the German school of Kant.

I hold that there is an inherent and essential distinction between good and evil, just as there is a distinction between truth and error. Gratitude to God is as certainly a virtue, as that "things which are equal to the same things are equal to one another" is a truth. Rebellion against God is as certainly a sin, as that "two parallel lines will meet" is a falsehood. I believe that the mind sees at once and intuitively the distinction between good and evil, as it sees the distinction between truth and falsehood. This it does by means of a power which we call the moral reason or conscience. But if there be such a power in man, native, constitutional, and heaven-implanted, it guarantees the existence of a moral governor. It points, too, to a day of judgment and of final retribution. And if there be an essential, an indelible, an eternal distinction between good and evil, and if sin be of evil desert, and deserving of punishment, the question is irresistibly pressed upon us, how is this sin which God hates, and must hate, to be forgiven; and how is man, who has committed the sin, and is conscious of guilt, and sensible of alienation, to be reconciled to God? Human reason can give no intelligent, no satisfactory answer to this question. All its investigations only conduct into ever-thickening darkness and gloom, in which fears and doubts have their appropriate dwelling-place. Who is worthy to open this sealed book, to unfold this mystery? When this question is put, all creation continues silent and abashed. The depth saith, it is not in me; and the sea saith, it is not in me. The thoughtful mind is not satisfied till it hears God himself proclaim, "Deliver him from going down to the pit: for I have found a ransom." The anxious spirit would weep like John till such time as it sees the lion of the tribe of Judah taking the book, and breaking the seals. The Scripture doctrine of the atonement thus fits in very beautifully, as was shown long ago by Anselm, to the holy character of God on the one hand, and man's felt wants on the other. I am sure that

one of the most convincing evidences in behalf of the Christian religion is to be found in its adaptation to man as a sinner and alienated from God. This is felt by every one who feels the binding obligation of the law, and who feels that he has broken that law. Many eminent writers in our country, such as Butler and Chalmers, have dwelt much on this branch of the Christian evidences, and have expounded, in a reflex and philosophic manner, what every one conscious of sin spontaneously feels. Not only so: a high view of man's moral nature tends to produce an orthodox theology. I am aware that systems of divinity should be constructed out of the Word of God, fairly and honestly interpreted. But divines who take low and inadequate views of the moral law, will ever be tempted to explain away those passages in which Christ is represented as truly a sacrifice for sin, and suffering in our room and stead, the just for the unjust. We find in our country that deficient views of the atonement have commonly been associated with imperfect representations of the Divine law and of the evil desert of sin. On the other hand, a high moral theory has ever tended towards an orthodox creed in all matters bearing on the Divine justice, on the punishment of sin, and the expiation of human guilt through the righteousness and sufferings of the Son of God.

These statements will show this conference what view Protestant divines in Great Britain are disposed to take of a specially French question:—"Is there a morality independent of the Gospel?" We answer at once, and without hesitation, that there is a morality prior to the Gospel, and in a sense independent of it. The Bible does not make human beings intelligent: it finds them so, and addresses them as such; it says, "We speak as unto wise men, judge ye what we say." Just as little does it make men moral and responsible agents: it finds them so, and speaks to them as such: "Why even of yourselves judge ye not what is right?" "Which show the work of the law written on their hearts, their conscience also bearing witness, and their thoughts the meanwhile accusing or else excusing one another." The Scriptures do not profess to prove the existence of God: they assume it, and come to us as a reve-

tion from God. Just as little do they propose to establish the reality of good and evil, or the distinction between them: they pre-suppose this, and address all men as so far capable of knowing and appreciating it. We rejoice therefore in the demonstrations by such men as M. Jouffroy, M. Cousin, and M. Saisset, of an independent morality, of a morality having the sanction of our moral reason. We think it of great moment in dealing with educated or thinking men, to be able to appeal to the fundamental truths which these men have shown by an appeal to consciousness to be in our very nature and constitution. We can say, as I once said to M. Cousin in a letter which I had occasion to write him:—"You acknowledge that there is an indelible distinction between good and evil, that sin deserves punishment, and I ask you to consider and answer the question, how is sin to be forgiven and man to be reconciled to God?" You have no such lever in dealing with those who have espoused a low materialism and sensationalism in philosophy, or a narrow utilitarianism in ethics: and we must guard against seeming to join them in their systems. For as they are not prepared to allow that there is anything which is in itself essentially evil, anything requiring and demanding punishment, so you cannot ply them with any argument fitted to convince them that they need a Saviour, or prepare them for believing in a supernatural revelation.

So far, we Protestants of England cannot agree with those Roman Catholic writers of France (I believe they are not supported by the wiser men of their own communion), who deny an independent morality, and would thus cast us helplessly on the authority of the Church. We believe in a moral law antecedent to the Gospel, a law which includes all men under sin, from which the Gospel remedy delivers us. We believe that this morality, shown on independent evidence to have a foundation in the nature of things, points to the need of a Redeemer, and thus furnishes valuable internal proof in favour of the divine origin of Christianity. We are sure that this independent morality joins with the Word of God in condemning much which we find sanctioned by the authority of the Church of Rome.

But, on the other hand, while we stand up for a morality independent of the remedial system of salvation, we do not plead for a morality which renders the Bible unnecessary, or which can justify the sinner apart from the Gospel. At this point we separate entirely from our mere academic philosophers who uphold not only the independence, but what is a very different thing, the *sufficiency* of an ethnic or natural morality. The opinion generally entertained by British Protestants has been expressed by Bacon :—"As concerning divine philosophy or natural theology, it is that knowledge or rudiment of knowledge concerning God, which may be obtained by the contemplation of His creatures; which knowledge may be truly termed divine in respect of the object, and natural in respect of the light. The bounds of this knowledge are, that it sufficeth to convince of atheism, but not to inform religion." We stand up then for the need of a supernatural revelation. For, first, the Bible gives us clearer views of God and of duty than the natural conscience does, and thus becomes one powerful means of rousing the moral monitor from its lethargy, and making it fulfil its proper office. The fact is, a just sense of sin, such as shuts us up into the Saviour, is very much a product of the application of the revealed law—for "by the law is the knowledge of sin"—always, however, of the law as applied to the conscience, and finding a response there. Secondly, and more particularly the moral law, whether revealed by our moral nature or in the Scriptures, provides no remedy for the breach of the law; on the contrary, it leaves us helpless under the condemnation which it pronounces. The natural conscience thus leads us, when we follow its guidance, into darkness, out of which it cannot conduct us. It may prompt us to cry for the light, but does not itself supply the light. We should rejoice when that light shines upon us from a higher region. Then, thirdly, mere natural ethics have not been able to furnish our young men with motives and strength to enable them to resist temptation, or to save a community from falling into fearful immorality. As the result of the whole, the felt weakness of this independent morality school is making it give way before a sensationalist and materialistic philosophy, which

threatens to have very extensive sway over the rising generation in Great Britain, as well as in France and Germany.

In the last generation—the generation now advanced in life, and passing away from the stage of time—the *a priori* philosophy had considerable sway in England. It owed its influence largely to Coleridge, Whewell, and others, who drew from the German school of philosophy, founded by Kant. But of late years there has been a strong reaction against it, against its method, its spirit, and its results. This has been brought about, to a great extent, by what I reckon the extreme positions which it has taken, in maintaining that the mind has *forms* or *norms* which it imposes on things, instead of holding, as it ought, that the mind has cognitive powers, enabling it to know what is in things; to know, for example, that there is an essential good in certain actions, and an essential evil in others. The reaction has been furthered among religious people by the tendency of the *a priori* philosophy towards rationalism in some cases, and towards pantheism in others. Certain it is that we have now in England a school with very considerable influence, which starts from sensationalism and tends towards materialism.

That school has sprung partly from the British school of Hobbes, Hume, and James Mill, and to a still greater extent from the French school of M. Auguste Comte. I call it the British Section of the School of Comte. The leader of it is Mr. John Stuart Mill, who has deservedly a high name in political economy and in inductive logic. He maintains that all our ideas are had originally from sensation, and are manufactured into their present form by the laws of the association of ideas, —these laws being those of contiguity in time and place and of resemblance, of contiguity among, or of resemblance between, things presented to the mind from without, from an unknown external world, working, for anything we know, fortuitously and fatalistically. It is doubtful whether this philosophy allows of any logical proof of the existence of God, or of the immateriality of the soul and of a day of judgment. I do not charge Mr. Mill with being a materialist, his philosophy may rather be described as one of *Nescience;* that is, he maintains

we can know nothing as to the reality of things either of mind or body. But the system tends towards materialism, and is in fact materialistic in the convictions of multitudes, who cannot appreciate the subtle distinctions of the founder of the school. It avowedly does away with all independent morality, and represents the conscience and all our moral ideas and convictions as formed out of sensations of pleasure and pain, by means of associations, which are determined by outward circumstances. The argument for the existence of a moral governor, derived from the law in the heart, powerfully urged by Kant and Chalmers, is entirely undermined; we are left without any proof of the existence of a moral government in this life, and of a world to come we can know nothing.

It might be shown by an extensive induction from the history of the past, that the theology of an age has commonly had a philosophy suited to it. An elevated philosophy has tended to produce a lofty theology, while a high theology has been stimulating a high philosophy; and, on the other hand, a low philosophy is apt to generate a meagre theology, while an inadequate theology is prone to lean on a low-toned philosophy. For some years we have had a disposition towards a negative theology in Great Britain, and now we have a negative philosophy corresponding to it and countenancing it. In theology there has been an inclination to omit justice from among the attributes of God, and to deny the expiatory nature of our Lord's sacrifice for sin. And now we have a philosophy which undermines an independent and eternal morality, and throws us back on pleasures and pains, as the elements out of which such moral ideas and convictions as we have are formed. These two are running their course together, and we may look for an offspring partaking of the nature of both to proceed from their marriage union.

In a paper read in 1864, at the conference of the British Branch of the Alliance, in Edinburgh, I spoke of the period as one of transition in respect of religious thought and conviction, and I predicted that "people would not remain long in their present state of vagueness and vacillation." Opinion has progressed rapidly since that time, and we are now seeing the

issue clearly. People were then trying to stop half way on the sliding scale; they are now made to see that they have no steady footing, they must either remount to the top which they have left, or sink to the base. We are now far beyond the age of the "Essays and Reviews," which made such a noise a few years ago. The writers of these papers are reckoned antiquated by younger thinkers, who have gone a good many steps further on in the same direction. This advanced school is furnishing articles for our periodical literature, is seizing some of the tutorships and professors' chairs in our colleges, and is watching the examinerships in the competitive trials for public offices, which have now such influence over the reading and studies of our educated young men. Parents, ministers of religion, and thinking men generally, should watch with deepest anxiety the effects of such a training. I happen to know that some of our youth have had their hearts wrung till feelings more bitter than tears have burst from them, as they feel that they cannot reconcile their old faith in Scripture with the sensational philosophy or materialistic psychology in which they are now being instructed. "Before I attended these lectures," said a young man to me, "I thought I had a soul; but as I listened to them I was not sure whether I had a soul or not." Not a few of those who were sent up to the colleges with the view of entering the office of the ministry have felt that they could not go on, and so have turned aside to other pursuits: some of them have become active contributors to our literary journals, and are writing against the old orthodoxy, and all that is peculiar in Christianity, with the bitterness of personal animosity. Others, with their faith shaken, have entered into the Church only to find how uncongenial the office is to them; and some of them have fallen before the temptations to which they are exposed, as they found themselves bound to articles which they had ceased to believe, and reading prayers into the spirit of which they could no longer enter.

And what is to be the moral influence exercised by such a training on our young men generally? There is a combined attempt in the present day to make the Articles to be believed as few as possible both in ethics and theology. Some of the

would-be leaders of opinion proceed upon, if they do not announce, the principle, that we are to look solely to what we should do, and not trouble ourselves with what we are to believe. But it can be shown that men's practice has always, consciously or unconsciously, been swayed to a large extent by their beliefs or convictions—not it may be by their formalized creeds or professed beliefs, which may be formed for them, and may, I admit, have little hold of them, but by their heart convictions,—that is, their real beliefs. Surely, in the worship of God, and in all the service we pay Him, there must be a belief in Him: "He that cometh to God must believe that He is, and that He is a rewarder of them that diligently seek Him." In the very performance of our ordinary duties there must at the basis of it be a conviction that the duty is binding on us. Undermine the conviction, and the performance of the duty will be apt to cease; or, if it is continued, it will be very much as the effect of an old habit; and the habit will never be produced among the young who have never had the conviction. I hold, then, that there is a very intimate connexion between our faith and our works. There is such a dependence in the experience of the individual; and there certainly is such a consequence in the history of communities. I do not for one instant maintain that all infidels have been immoral, but it can be proven that a generation trained in infidelity has commonly become immoral. Train a generation to say that there is no essential distinction between good and evil—no distinction except in the pleasure and pain which they may bring; undermine faith in God and in a judgment day, and you have left nothing to a large proportion of young men to enable them to resist the temptations of life.

But then we are being constantly told that infidelity is not characterized in these times, as it was in former ages, by immoral practices. But those who urge this overlook the circumstance that the new form of infidelity has not yet had time to bring forth its proper fruits and show its effects; these we cannot discover till we have a generation trained under its influence. Montesquieu maintains that the Epicurean philosophy had much to do with the immorality which at last sank

the Roman empire; but these consequences were not seen till a considerable time after Epicureanism had become the prevailing creed of the upper classes. We all know what debasing and immoral consequences flowed from the prevalence of the sensational philosophy in France; but these results did not appear till half an age after the time of Condillac, the founder of the school. We cannot see the full influence of the training to which some of our young men are being subjected, till the generation reared has had time to show itself to the world, that is, till the evil has been wrought, and those who have sown dragon's teeth will be made to acknowledge their criminality and folly, only when they find that armed men have sprung up and are working havoc and destruction.

Is a young man setting out in life with a belief only in what this philosophy allows, prepared to meet the temptations which will assail him, the temptations to pride and self-righteousness, and the temptations to vice? Is a generation so fed and nurtured, likely to maintain an elevated standard of purity and unselfishness, and to resist the vanities and lusts to which mankind are prone? The negative philosophy and theology have not yet had time to work out their full effects; but I believe that we have already too abundant evidence that the moral corruption has begun to work among the upper and the educated classes, that is, the only classes who have as yet felt their influence. And if the influence has already been injurious in these circles, how deleterious must it be when it has time to penetrate the whole of society, and go down in its results (not in its processes) to the lower orders. Meanwhile, what mean these exposures in the pages of our highest literary journals of the coarseness in manner, speech, and conduct of a certain circle of ladies and gentlemen belonging to our very aristocratic classes; denoting a state of things to which we had nothing similar twenty or even ten years ago? Whence the complaints of fast living among so many of our educated young men? Everyone knows that the coarseness and recklessness are associated with, I believe, that in fact they proceed from, a spirit of unbelief and scoffing: it is a matter of fact that they exist in the classes whose faith in Christianity has been undermined.

Let me tell some of these journals that they are chargeable, directly or indirectly, with helping to produce the very immorality which they cannot bear when it appears. They profess to wish to have a high morality, but they have done their best to destroy the beliefs from which alone a pure morality can proceed—they have cut down the tree, and they wonder that they have no fruit—they have killed the goose, and then are amazed that they cannot have the golden egg. Some of them have been smitten with an excessive admiration of Thomas Carlyle (who, again, was greatly swayed by Goethe and the German pantheists), and they are great hero-worshippers, and ever deploring that we have fallen on a low age, and have not the heroes of former times. They forget that these heroes of bygone ages were all men of faith, and owed their courage and their devotedness to this faith—which faith is all the while pictured by these writers in an odious light. Such men as Carlyle and Froude, belonging themselves rather to the past age, but helping to form the present, have pronounced the highest eulogiums on Knox and others of our Protestant Reformers; but then they jeer at the creed which made these men what they were, and undermining the faith of the past, they do not profess to be able to furnish anything to take its place.

The question is pressed upon us—What is to be done to meet the evil?

In answering it, I must confess that I do not expect the evil to be counteracted by the mediæval, or as it calls itself, the Catholic reaction which has set in so strongly in the Church of England. I am quite aware that this Church revival sets before it a very high moral model, and it has a strict discipline. But the tendency of the reaction is evidently towards the Church of Rome; and Popery, so far from being able to wrestle with infidelity, has been gendering it in all countries under its sway. The sceptic points to the unbelievable dogmas and intolerable pretensions of the Church of Rome with a sneer, and justifies himself in rejecting all religion; while the great mass of the people standing at a distance and viewing the combatants, and not knowing what to believe, content themselves with securing as many as possible of the pleasures of this world. In Oxford,

mediævalism and infidelity stand at this moment face to face, and the one tends to produce the other—as they have long done on the continent of Europe.[1]

(1.) In this contest, philosophy, more particularly ethical philosophy, has a work to do. It must show that the ideas and convictions which we have in regard to moral good, and the distinction between good and evil, cannot be furnished by associated sensations, but are sanctioned by our very constitution, and the God who gave us our constitution. The process by which they affect to generate our moral beliefs is like that of the old alchemists, who, when they put earth into the retort, never could get anything but earth, and who could get gold only by surreptitiously introducing some substance containing gold. The philosopher's stone of this modern psychology is of the same character as that employed in mediæval physics. If they put in sensations only, as some do, they never have anything but sensations, and a "dirt philosophy," as it has been called, is the product. If gold is got, as it has been by some, it is because it has been quietly introduced by the person who triumphantly exhibits it. In opposing the error it must be shown that we are under law to God, and the unbending nature of that law must be upheld at all hazards. You Hollanders know what havoc would be wrought in your industrious and prosperous country if the ocean could but succeed in breaking down these dykes of yours, against which it is ever beating; and we admire excessively the skill and zeal you have shown in keeping up your defences. But greater evils, personal and national, will rush in upon us like a flood, if we allow that law, which God has set as our defence, to be broken down. Again, that law must be used to show us that we need an atonement; and as a schoolmaster to shut us up into Christ. We must see that in our theology there is ever a deep moral element. It must be further maintained in all our preaching, that we are specially under law to Christ, and bound to cultivate the evan-

[1] We know what influence has been exercised by the older movement in revival of confessional, etc. I advise the friends of Oxford to look narrowly into the *moral* results of the later infidel movement. I have trustworthy letters on this subject, but they are marked *confidential*.

gelical graces of faith and repentance, and to exhibit the virtues of the Christian life, such as purity and self-sacrifice.

(2.) But the evil will never be cured by mere philosophy. It is to be met, as the errors and sensualism of ancient Greece and Rome were, by an exhibition of Christ and his doctrine in all its fulness and purity. This was reckoned by the ancient Greeks, as it is still reckoned by the modern Greeks, "foolishness;" but it is truly the power of God, a power from God, and a power in man supplying motives, and giving strength to enable him to conquer temptation, and to rise to holiness in life. We have found in our country, that in very proportion as the old faith of the Gospel has been preached simply and faithfully by our ministers, and believed in by the people, so has been the elevation of moral tone and practice in the community. I could fondly dwell on this topic, but the space allotted to me is exhausted, and the general theme must come up in other papers.

I have thought fit to exhibit some of the false notions that have risen up, or are rising up in my country. But I do not wish to leave the impression that I am speaking in a spirit of despondency or of fear. The English mind has always been peculiarly sensitive as to the practical tendency of every philosophic doctrine. It was in reference to its bearing on morals, that British thinkers, English and Scottish, first saw the defects of the philosophy of Locke. And when the British public begin to see that this new philosophy tends to undermine the fundamental principles of morals, it is certain that they will turn away from it with loathing. Its triumph is partial for the present, and can only be temporary.

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